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Original Articles

THE CLINICAL HISTORY AND RECOGNITION OF TUBERCULOUS MENINGITIS

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NEW YORK

The symptomatology of tuberculous meningitis when well inaugurated is certainly characteristic and can offer very few difficulties to those who have followed any number of these cases through an illness There has always been, however, a desire on the part of clinicians to recognize the disease in its incipient stage, or as the books call it, the first stage of the disease So important a matter is this to the practitioner that the consultant is often confronted in his daily work with the important problem as to whether a certain symptom complex can definitely be said to be indicative of tuberculous meningitis There was a discussion of this matter in a meeting of the Pediatric Society in 1890 At this time stress was laid on the fact that the early diagnosis of tuberculous meningitis was not only difficult but in some cases well nigh impossible. Such symptoms as persistent vomiting, irregularity of pulse and of respiration and apathy certainly were indefinite guides to an early diagnosis To day, however, with our advanced clinical methods, we are able to approach a case with greater certainty than was possible in past years

During the past six years I have been fortunate in having under direct observation no less than fifty-two cases of tuberculous meningitis in my hospital service These cases were admitted at different periods of the disease, some coming to me on the second day of pronounced symptoms, others as late as the sixth week of the disease, the average duration of the disease before admission to my service being one week

In all the cases which I will utilize for this paper the diagnosis was fixed clinically and confirmed either by postmortem examination, lumbar puncture or by animal experimentation An opportunity is thus offered to consider an accurate symptomatology of cases which have been absolutely proved to be of a tuberculous nature In all a tentative clinical diagnosis was at first made before the lumbar puncture was considered In other words no case was punctured unless there was a suspicion, at least, of meningitis, primarily that of the tuberculous variety

AGE OF THE PATIENT

The oldest case coming under our observation was ten years, the youngest six months Eleven were under one year of age Thirty-four per cent (18 cases) were under two years of age, and thirty per cent, (16) were under four thirty-four (18) were four years of age and over The average of all the cases was four years and four months

I have studied these cases first as regards the mode of onset, the condition of the nervous system, as evinced in rigidity of the neck, the Kernig symptom, the Babinski reflexes, general reflexes, the MacEwen sign, hyperesthesia, condition of the facial muscles and those of the eyes, the breathing, as to rhythm whether regular or not, the condition of the fundus of the eye, that of the blood, whether a leucocytosis was present or not, and the results obtained by lumbar puncture Incidentally, also, the course of the temperature, the complications and the presence of eruptions

MODE OF ONSET

The mode of onset in tuberculous meningitis has always been a matter for careful study and consideration, and there are cases recorded in the literature in which the mode of onset of tuberculous meningitis closely resembled that of cerebro spinal meningitis of the epidemic type Osler records a case in which the onset was sudden and in which the fatal issue occurred within six days

In all my cases old or young, I have never met an instance of such a rapid and lethal course of the disease The nearest approach to such a rapid onset is the following

Patient—Male, aged 10½ years, family history negative

Past Illness—Measles when 1 year old and diphtheria (?) at 4 Right arm fractured three years ago No history of ear disease or glandular enlargement, no cough night sweats nor hemoptysis had been struck on the nose four weeks previously with a very hard snowball Nose became very much swollen and red, and was apparently in normal condition again in about a week

Present Illness—This began one week before the child was seen with feeling of lassitude loss of appetite and headache On the night of onset of illness vomited once, projectile in character Mother said there had been no fever and strabismus until past twenty four hours No chill or convulsions, but constant severe frontal headache without delirium Pain in nape of neck since day previous but mother did not notice rigidity Photophobia had been marked since onset Bowels had been markedly constipated all week, and there had been some abdominal pain Urination was normal

Physical Examination—This was made on January 27 General condition good well nourished, mental condition not apathetic, child answered questions intelligently Marked hyperesthesia causing child to resist interference The MacEwen sign was absent, delayed tache cerebrales, erythematous flush over lower thorax, abdomen and thighs anteriorly Larynx thyroid and spine negative finger tips showed slight cyanosis, no clubbing Neck showed marked rigidity

Eyes Pupils equal, react to light and to accommodation Marked internal strabismus of right eye slight internal strabismus of the left, no petechiæ, but slight injection of conjunctivæ, no facial paralysis

Ears and mastoids were negative

Mouth Tongue moist heavily coated, teeth and gums in good condition, throat congested No herpes, but a fissure at left oral angle

Lymph nodes Postcervical, axillary, inguinal and left epitrochlear nodes were palpable

Lungs Moderate infra and supra clavicular retraction—more marked on right side, expansile lower is good, anterior negative, posterior dulness at apex with a few sibilant râles, prolonged respiration

Heart Upper border at third rib, right border at r b of sternum, left border at nipple line, apex beat visible and palpable in fifth space, outside of the nipple line, no precordial bulging, action sligthly irregular, slight accentuation of first sound at apex, systolic murmur over both basic orifices, moderate accentuation of second pulmonic sound

Pulses, Equal, slightly irregular, full, moderate force No thickening or tension

Liver Fourth space, sixth space to one finger below free border, not palpable

Abdomen Distended, tympanitic, except in hypogastrium, where it was dull, no fluid wave, left kidney palpable, ascending colon too full for satisfactory palpation of right kidney Spleen observed by tympany, not palpable

Extremities Patellar reflex present, Kernig present on both sides, no clonus, no Babinski, cremasteric reflexes on both sides and umbilical reflex present

Genitals Both testes descended, right inguinal being large, no impulse on coughing

Rectum Negative

January 30 Patient was quite rational for past twenty four hours; Kernig persisted in spite of fall of temperature There was considerable rigidity of neck and strabismus was still present He did not pass into the intervals of delirium which were previously present and took his nourishment well, hyperesthesia was marked, slept well

February 1 From time of admission patient had a moderate continuous fever, with slight morning and evening variation He was conscious, but lapsed frequently into mild delirium, did not complain of headache and did not vomit The meningeal signs were practically unchanged, respirations were markedly irregular, the white blood cells, 15,800

February 4 In the past few days condition had become poor, patient was more stuporous, but still conscious when spoken to, no longer complained of headache or pain On February 3 temperature rose to 103 8, the fever generally had been high and continuous, internal strabismus was more marked and there was flattening of right side of face, the mouth was drawn to left side There was marked rigidity, but no opisthotonus, Kernig sign was more marked on left side and there was no Babinski Marked tâche cérébrale, very slight twitching of the arm

February 5 Slight improvement in patient's mental condition, he answered when spoken to, but speech was very indistinct and low, right facial palsy persisted, respirations were audible and the tongue had a tendency to fall back, since the afternoon previous patient had difficulty in swallowing Double optic neuritis was present and around the right disc were seen several hemorrhages

February 6 Temperature, 99 4, Kernig sign present (10 a m) Lumbar puncture was performed and about 50 c.c. clear fluid were withdrawn.

Pathologic Report—Cytology Polynuclears, 10 per cent., lymphocytes, 90 per cent Spreads Tubercle bacilli Culture Negative. Albumin Increased. Sugar Negative

On admission this case impressed the writer as being one of cerebrospinal meningitis of the epidemic variety on account of the marked rigidity, hyperesthesia, the activity of the delirium, and the positiveness of the assertion of the parents of the sudden onset When lumbar puncture was made the error was proved

In all classes of society parents do not always observe accurately, and it is possible in all these cases in which the onset is said to be abrupt that there has been an indefinite period preceding the pronounced symptoms in which the patient did not feel entirely well Children do not complain of mild symptoms as a rule They are so anxious to be about and in the open that a slight headache and any indisposition, or a mild degree of fever would scarcely be noticed Hence I must regard a data as to sudden onset in the majority of cases of tuberculous meningitis as of doubtful nature.

Most mothers, it is true, are excellent clinical observers of their own children if they are allowed the time t observe Among the poorer classes such time is no at their disposal, and the result is that the initial perio of the disease is lost to observation One mother ma notice the insidious change in the conduct of her chil whereas another mother would scarcely have the tim to see these changes, being too much occupied with her other duties to observe It may be said here that in 86 per cent of the cases, that is in 42 cases, a positive history of insidious onset was given The mother could tell us that the infant or child was not quite well, complained (if it was old enough) of slight headache and vomited from time to time In those cases which came to us early, as in the second day of the disease, there was no history of vomiting Generally there was a slight febrile movement, or the child was irritable, refused to nurse, or the mother simply noticed that the little one was not itself It is only in those cases that came to us after the disease had lasted a week that there was a history of vomiting In some of the cases among the older children there was complaint of pain and headache, in other cases there may have been a convulsion As a rule, however, convulsions were not present until the disease had lasted fully twelve days or two weeks

In the remaining cases (10) there was lacking a history of slow onset. One mother, bringing a child of six and a half years of age with a duration of illness of six weeks, thought that the disease began suddenly with fever, chill and headache In our history there were two other cases of seven and eight years, respectively, in which the mother thought the disease began suddenly with vomiting and headache Another case of two years, in which the mother asserted that vomiting and convulsions suddenly set in In all these cases the house physician could not obtain a positive history of sudden onset, so that the child may have been ill for a week previous to the vomiting and convulsions, with slight malaise, and a busy mother, distracted by household cares, may not have noticed that the child was ailing Therefore, confirming what is generally known of this disease, the onset in the majority of the cases that we could trace in the reliable histories was slow and insidious

NERVOUS SYSTEM

The condition of the nervous system is of special interest in all these cases Of greatest importance is the presence or absence of rigidity There are some cases of tuberculous meningitis in which such rigidity is absent at all periods of the disease Fourteen of our cases were of such a nature, in other words, 27 per cent. In some cases opisthotonos and rigidity, if present, as a rule were slightly marked, that is, the head was movable almost to a normal degree Rigidity in all cases is tested simply as a child lies in bed, the head is raised, and if with the head the body is raised also, rigidity is considered to be present. In some cases a rigidity may only mean a stiffness of the neck, such a symptom will be easily recognized by any intelligent physician In no case did rigidity appear before the first week, and in this respect tuberculous meningitis differs markedly from the meningitis of the acute cerebrospinal type, that is, especially of the epi-

demic form, in which rigidity is the rule and opisthotonos not infrequent

Patients with tuberculous meningitis lie stupid, they do not notice what is going on and do not react to irritation as do cases of meningitis of the epidemic form Hyperesthesia, either of the surface or the senses, as a rule, is absent or slightly marked Such was the condition in 90 per cent of my cases In this respect tuberculous meningitis differs distinctly from that of the epidemic cerebrospinal form, in which hyperesthesia is the rule, not only from the onset but throughout the disease

Much stress has been laid by various authors on the diagnostic value of the Kernig symptom in cases of meningitis, but it must be said that though we have found the Kernig symptom present in 22 of our 52 cases, it was absent in others, and does not aid the ultimate diagnosis of the disease In fact, clinically, there are other symptoms which are more significant in the cases of tuberculous meningitis, which we have studied, than the Kernig symptom

Strange to say, the Babinski reflex in children over two years of age is a much more valuable guide, clinically, as to the nature of the meningitis, if meningeal symptoms are present, than the Kernig phenomenon In our 52 cases of tuberculous meningitis the Babinski reflex was present in 23 cases, and, if present, to my mind, it is presumptive evidence of the tuberculous nature of the disease, as compared to what is noted in the acute suppurative forms of meningitis I have only found it present in exceptional cases of cerebrospinal meningitis of the epidemic type or of the suppurative form The general reflexes were present in most of our cases of tuberculous meningitis, except in those where the patients came to us very late in the disease, in these they were abolished

SKIN ERUPTIONS

The presence or absence of herpes or skin eruptions does not help us in the diagnosis of tuberculous meningitis, inasmuch as their absence is the rule and their presence is very inconstant. Certainly the presence of herpes and petechiæ are characteristic of cerebrospinal meningitis of the epidemic form, and at the outset of meningitis the presence of petechiæ speaks in favor of the epidemic form of the disease and will aid us in excluding the tuberculous forms Herpes are seen in tuberculous meningitis, and if present are due possibly to a complicating neuritis or pneumonia.

Some of the minor points of diagnosis, such as the tâche cérébrale, which is present in most cases, not only of meningitis but in affections accompanied by cerebral symptoms is of very little value and useless as an aid to diagnosis

The pulse also as to its frequency and quality is of questionable value in the diagnosis of tuberculous meningitis It is true in the acute suppurative forms of meningitis, especially cerebrospinal meningitis of the epidemic type, the pulse is quite rapid But there are periods in this disease where the pulse may not only be slow but irregular, as in tuberculous meningitis, so that we can scarcely conclude from the frequency and quality of the pulse anything of diagnostic import

The respirations in tuberculous meningitis are irregular in rhythm, sighing in character and in some cases take that form called Cheyne-Stokes The same form of respiration is seen in meningitis of various types, so that we can scarcely consider the respiration, its character and frequency, as of any value in concluding as to the specific form of meningitis present.

Vomiting in tuberculous meningitis occurs at a time when the ventricles begin to be distended with fluid It is rarely persistent In a few cases of my series there was a history of unusual vomiting, but in no case could it be said that this vomiting formed a leading feature of the disease, nor did it attract attention to any extent, and its presence had to be ascertained by close questioning of the parents or friends of the patients As a rule vomiting occurs once or twice in tuberculous meningitis It is certainly not persistent. After the condition of hydrocephalus is well established vomiting may be repeated at frequent intervals

TEMPERATURE.

Of great utility is an exact observation of the course of the temperature at an early period of the disease The absence of fever or a persistently low temperature with some of the cerebral symptoms detailed in this paper is very strong evidence of the presence of tuberculous meningitis In those cases of tuberculous meningitis in which the temperature ranges as high as 104 and 105 we are either in the presence of a complication or in the period of the disease close to the exitus As a rule, toward the exitus the temperature rises

PARESIS

The presence or absence of localized paresis of the face or extremities is only useful as an aid to diagnosis toward the close of the disease Being absent at an earlier period of the affection, it is of no value at this time and only becomes apparent when the accumulation of fluid in the ventricles and subarachnoid space is considerable Pareses having once been established, their evanescent character is of great import It is not infrequent to find that left facial paresis one day will give way to a paresis on the right side of the face the next This is quite characteristic of tuberculous meningitis, and can only be explained by the fact that some of these pareses are caused by pressure on the nerves at the base of the brain and that this pressure is apt to change from time to time, varying with the amount of distension of the lateral ventricles by fluid

BLOOD

The presence or the absence of a leucocytosis or we may say, the presence of a leucopenia, has long been considered as a very valuable adjunct to diagnosis in tuberculous meningitis, as in tuberculous processes elsewhere In 35 cases of the series of 52 that we have studied the leucocyte count was lower than 20 000 to the c mm at certain periods of the disease In the remaining cases the leucocyte count varied from 20 000 to 29,000 white blood cells to the c mm In no case did the leucocyte count exceed 29 000 to the c mm except in those cases in which a blood count was taken in the presence of impending death In such cases the leucocyte count was found to be 32 000 to the c mm and in one case 39 000 It may be said therefore that leucopenia is presumptive evidence of a tuberculous process We can not conclude positively in the [illegible] of the opposite condition that no tuberculous process is present

The lowest leucocyte count of any tuberculous case of the 52 utilized in this paper was 7 200 The [illegible] of the blood therefore, as far as the leucocyte count is concerned does not reveal anything pathognomonic of the disease

THE CONDITION OF THE EYES

Of great interest in this form of meningitis, as compared to other types of the disease, is the condition of the fundus The eyes of all our cases of meningitis were examined by Dr Gruning or his assistants in the eye service of the hospital and he examined 46 of our cases of tuberculous meningitis Of these cases the fundus was normal at the outset of 34 per cent of the cases In 66 per cent of the cases there was some change in the disc, varying from optic neuritis to the presence of tubercle in the tissue of the choroid In some cases the disc was simply swollen and indistinct in its margin, in other cases the veins were distended The interesting fact is that choroid tubercle was present in 9 cases of the 46 examined as early as the second day of duration of the active symptoms of the disease, that is from the first to the sixth week of the disease These tubercles in the choroid may be discovered at any period of the affection I have seen them present in the fundus when the cerebral symptoms were insignificant

As distinguished from this condition of the fundus in tuberculous meningitis, we may mention the fact that in meningitis of other types, especially in the cerebrospinal meningitis of the epidemic type, the fundus in the majority of the cases shows very little, if any, change throughout the disease The presence of optic neuritis in cerebrospinal meningitis is exceptional! it certainly is not as frequent as in tuberculous meningitis

PERCUSSION OF THE SKULL.

Of great value at the outset of tuberculous meningitis, where the symptoms are rather equivocal and while the child is still apparently conscious and plays during part of the day, is percussion of the skull MacEwen was the first to apply this method of diagnosis, and his cases were mostly those of tumor or abscess at the base of the brain pressing on the veins in this locality and thus causing hydrocephalus Although he investigated a large variety of cases in children and applied percussion of the skull to them in making a diagnosis of distension of the ventricles by fluid, he did not devote his attention to any one disease specially In my studies of tuberculous meningitis and meningitis of the epidemic cerebrospinal type I have followed out percussion of the skull according to the method of MacEwen This method I have described elsewhere, and I have applied it to healthy children in order to determine at what age this sign could be relied upon as an abnormal manifestation in children That is, at what period of life the tympanitic note obtained by percussion over the lateral ventricles could aid us in a diagnosis of hydrocephalus It may be said that beyond the age of two to two and one-half years, when the skull is completely ossified, this sign should not be present if there is a normal conformity of the head and if there has been no pre-existing hydrocephalus

In 34 of the 52 cases which I have studied of tuberculous meningitis I have found that a percussion of the head at a very early period of the disease following MacEwen's method as to the position of the patient, which should be upright with the head slightly inclined to one side, the percussion being performed at the pterion, is a most valuable means of discovering the presence of hydrocephalus interna in tuberculous meningitis

I recall the case of a girl of fourteen, who had been ill only one week, complained of headache, felt tired, with a tendency to be drowsy at times of the day, at others she was quite bright The patient had absolutely no fever for eight days When I saw the patient she was apparently asleep in bed, could be easily aroused, and when aroused recognized her physicians There was very little rigidity of the neck, although Kernig's sign was present Percussion of the skull cap in this case, according to the lines marked out by MacEwen, gave a tympanitic note over the pterion, and on this I unhesitatingly made a diagnosis of hydrocephalus, to the astonishment of the physician, who thought he had to deal with a case of hysteria, knowing, as I did, that hysteria could certainly not produce a percussion note of tympanitic character over the situation of the lateral ventricles of the brain

This case was subsequently seen by other consultants, who were inclined at first to disagree with the diagnosis of tuberculous meningitis A week subsequent to my examination the patient died with the classical symptoms of tuberculous meningitis, the other consultants agreeing in the diagnosis Percussion of the skull at an early period of tuberculous meningitis is certainly one of the most valuable aids in diagnosis

LUMBAR PUNCTURE

The fluid obtained by lumbar puncture in cases of meningitis of the tuberculous and other varieties has been studied as to the pressure under which it is contained in the ventricles and in the subarachnoid space (Quincke, Ricken, Falkenheim, Pfoundler) As to its appearance, speaking now of tuberculous meningitis, (Lichtheim, Schiff, Brenner), as to its density (Achard and Loeper), its cryoscopy (Widal and Sicard), its chemical properties (Gautier, Achard), its toxicity (Widal, Sicard, Lensé), and its agglutinating properties in case of the tubercle bacillus (Hawthorn)

All above directions of study are of great value scientifically and have their important remote bearings Clinically, the physician at the bedside is not equipped to carry out methods which will give him details as to the above, and we must seek practical results rather from an examination of the bacterial and cellular content of the fluid obtained by lumbar puncture Inoculations in animals and cultures are also tedious, and though certain as far as animal experiment is concerned, 100 per cent of the cases being positive (Widal and Le-Sourd), the physician seeking immediate results must resort to an examination of the centrifuged fluid by stain for the tubercle bacillus Even here one would think that uniform results would be obtained Marfan found bacilli only in exceptional cases, Heubner had similar results Friedjung found them frequently, Kohts in 50 per cent of the cases, Pfaundler in 70 per cent of the cases, Schlawyk and Manicatide in 16 of 19 cases Lichtheim found the tubercle bacillus always present Pfaundler found the bacilli more readily in the later periods of the disease (75 per cent) than in the early stages (33 per cent) Our own cases seem to show that though in the later stages of the disease the bacilli may be more abundant, their presence in the early stages can be verified by patient search of the fluid

I have intimated in this paper that in 52 cases of tuberculous meningitis I have been able to make a diagnosis clinically in the majority of cases without the aid of what may be considered our most valuable precise diagnostic method, that of lumbar puncture In other words, lumbar puncture in the majority of my cases was performed after the diagnosis of tuberculous meningitis had been made as a possible condition The

fluid withdrawn was then examined as to the presence or absence of tubercle bacilli

I have left this procedure for more detailed consideration because I wish to show that it is possible with moderate certainty, to make a diagnosis of tuberculous meningitis early in the disease from a consideration of clinical methods which I am describing No case of tuberculous meningitis should be positively considered as such until it had been studied for some length of time, a few days at least, because first appearances are always deceptive, and such a diagnosis once made is quite a serious blow to the friends of the patient. We should be exceedingly cautious, therefore, not to fix the diagnosis of tuberculous meningitis without the aid of an extended previous study of the case either through another physician or our own study at the bedside Once having made a diagnosis of its possible presence, we may then proceed, and then only, to make a lumbar puncture in order to fix the diagnosis beyond equivocation

I have never made a lumbar puncture in these cases without feeling that a meningitis of some kind was present. In other words, lumbar puncture should be resorted to only as a means of confirming or excluding the presence of a disease whose prognosis is hopeless In this respect is it valuable to the friends of the patient? It is in tuberculous meningitis, especially, that much confusion has resulted on account of the various data given in different clinics as the result of the careful examination of the fluid obtained by puncture Personally we consider that lumbar puncture is an absolutely certain means in a majority of cases of confirming the diagnosis of tuberculous meningitis, for we feel that in the majority of the cases tubercle bacilli can be found in the puncture fluid if care and diligence be exercised. The fluid, of course, must be drawn so as to be free of the mixture of blood, and a certain amount of experience is necessary to succeed in this respect. It must then be carefully centrifuged in order to examine the sediment During the past five years we have examined 66 successive cases, of which two were doubtful, diagnosed clinically as tuberculous meningitis with a view of detecting tubercle bacillus in the puncture fluid In 42 cases we have found the tubercle bacilli I may say here that one man alone examined all fluids, and it is due to his patience that we have been able to prove that a diagnosis is possible in the majority of cases from the examination of the puncture fluid Dr Bernstein of the Mt Sinai Hospital staff has devoted his time to this study, and a more detailed account of this work can be found in a monograph recently published by him

In previous years we have not been successful in obtaining positive results in the examination of the puncture fluid and we feel that this has been due to a faulty technic In the years 1904 to 1906 29 cases diagnosed as tuberculous meningitis revealed tubercle bacilli in the fluid of puncture in 24 In two of these 29 cases a diagnosis was not fixed positively at the time of puncture Thus in 24 of 27 cases punctured tubercle bacilli were found as confirming the clinical diagnosis In those cases, it may be mentioned incidentally, in which tubercle bacilli were not found in the puncture fluid, the laboratory was kind enough to inject this fluid into guinea-pigs, and in this way secured a positive result This however, was in an early period of our studies on the disease

Thus it may be said that, given a case which clinically leads us to surmise the presence of tuberculous meningitis, a lumbar puncture is the most valuable aid we have to fix the diagnosis beyond a doubt, because in the majority of cases tubercle bacilli can, by patient search, be found in the fluids

In some cases tubercle bacilli are not found during life in the puncture fluid, but are found in very large numbers in the fluid withdrawn from the subarachnoid space after death This can be explained by the fact that during life there is a constant circulation wave present in the subarachnoid space, which keeps the tubercle bacilli in equal suspension, thus few tubercle bacilli will naturally escape discovery After death this circulation wave ceases, a sedimentation of the bacilli takes place, especially in the bottom of the spinal canal, and are thus easily withdrawn in the puncture fluid

We have studied also the cytology of the fluid obtained by lumbar puncture in tuberculous meningitis This cytology we have tabulated in 18 cases as follows

Cytology of the Fluid Obtained by Lumbar Puncture, 19 Cases of Tuberculous Meningitis

Per cent. Polynuclear cells.	Per cent Mononuclear cells	Per cent Polynuclear cells	Per cent. Mononuclear cells
5	95	50	50
	100	5	95
20	80		100
10	90	3	97
15	85		100
10	90	3	97
30	70	30	70
10	90	15	85
8	92	35	65
8	92		
Albumin.	**Sugar**	**Albumin.**	**Sugar**
+	0	+	0
+	0	4m	0
+	0	+	0
+	0	+	0
—	—	+ ½	0
+ 3m	0	+	0
3m	0	5m	0

Fourteen cases examined for sugar 0 and albumin increased.

The cellular content of the fluid obtained by lumbar puncture in cases of tuberculous meningitis has been studied by Widal, Sicard and Ravant and shown to be not only of great interest, but also of diagnostic import Their studies have been enlarged by Lenhartz, Pfaundler, Councilman, Wentworth and others It may be stated that in the fluid obtained from cases of tuberculous meningitis there is a predominance of the lymphocytes in the greatest number of cases The rôle played by the polynuclear leucocytes has been a matter of much discussion and it has been shown that in rare cases the polynuclear leucocytes may predominate in the fluid obtained by the puncture Bernheim, Moser and Marcon-Mutzner have published such cases It may be said, however, that this polynuclear picture is not a primary one in tuberculous meningitis It is found either in the latter stages of the disease when there is a great invasion of the tubercle bacilli into the diseased area or in cases in which there is a mixed secondary infection At all events polynuclosis coincides with an invasion of an increased number of tubercle bacilli or the breaking down of old caseous areas and thus numbers of bacilli are set free into the cerebrospinal fluid so that an error which might be at first made by a misrepresentation of the predominance of polynuclear leucocyte is rectified by the [illegible] of tubercle bacilli in the puncture fluid On the other hand lymphocyte is of the puncture fluid has [illegible] exceptionally in cases of meningism in typhoid [illegible] in the serous meningitis of bro[illegible] enteritis [illegible] in the cerebral tumor and in [illegible] in syphilitic meningitis (Widal) He [illegible]

THE CONDITION OF THE EYES

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Of great value at the outset of tuberculous meningitis, where the symptoms are rather equivocal and while the child is still apparently conscious and plays during part of the day, is percussion of the skull MacEwen was the first to apply this method of diagnosis, and his cases were mostly those of tumor or abcess at the base of the brain pressing on the veins in this locality and thus causing hydrocephalus Although he investigated a large variety of cases in children and applied percussion of the skull to them in making a diagnosis of distension of the ventricles by fluid, he did not devote his attention to any one disease specially In my studies of tuberculous meningitis and meningitis of the epidemic cerebrospinal type I have followed out percussion of the skull according to the method of MacEwen This method I have described elsewhere, and I have applied it to healthy children in order to determine at what age this sign could be relied upon as an abnormal manifestation in children That is, at what period of life the tympanitic note obtained by percussion over the lateral ventricles could aid us in a diagnosis of hydrocephalus It may be said that beyond the age of two to two and one-half years, when the skull is completely ossified, this sign should not be present if there is a normal conformity of the head and if there has been no pre-existing hydrocephalus

In 34 of the 52 cases which I have studied of tuberculous meningitis I have found that a percussion of the head at a very early period of the disease following MacEwen's method as to the position of the patient, which should be upright with the head slightly inclined to one side, the percussion being performed at the pterion is a most valuable means of discovering the presence of hydrocephalus interna in tuberculous meningitis

I recall the case of a girl of fourteen who had been ill only one week, complained of headache, felt tired, with a tendency to be drowsy at times of the day, at others she was quite bright. The patient had absolutely no fever for eight days When I saw the patient she was apparently asleep in bed, could be easily aroused, and when aroused recognized her physicians There was very little rigidity of the neck, although Kernig's sign was present. Percussion of the skull cap in this case, according to the lines marked out by MacEwen, gave a tympanitic note over the pterion, and on this I unhesitatingly made a diagnosis of hydrocephalus, to the astonishment of the physician, who thought he had to deal with a case of hysteria, knowing, as I did, that hysteria could certainly not produce a percussion note of tympanitic character over the situation of the lateral ventricles of the brain

This case was subsequently seen by other consultants, who were inclined at first to disagree with the diagnosis of tuberculous meningitis A week subsequent to my examination the patient died with the classical symptoms of tuberculous meningitis, the other consultants agreeing in the diagnosis Percussion of the skull at an early period of tuberculous meningitis is certainly one of the most valuable aids in diagnosis

LUMBAR PUNCTURE

The fluid obtained by lumbar puncture in cases of meningitis of the tuberculous and other varieties has been studied as to the pressure under which it is contained in the ventricles and in the subarachnoid space (Quincke, Ricken, Falkenheim, Pfoundler) As to its appearance, speaking now of tuberculous meningitis, (Lichtheim, Schiff, Brenner), as to its density (Achard and Loeper), its cryoscopy (Widal and Sicard), its chemical properties (Gautier, Achard), its toxicity (Widal, Sicard, Lensé), and its agglutinating properties in case of the tubercle bacillus (Hawthorn)

All above directions of study are of great value scientifically and have their important remote bearings Clinically, the physician at the bedside is not equipped to carry out methods which will give him details as to the above, and we must seek practical results rather from an examination of the bacterial and cellular content of the fluid obtained by lumbar puncture Inoculations in animals and cultures are also tedious, and though certain as far as animal experiment is concerned, 100 per cent of the cases being positive (Widal and Le-Sourd), the physician seeking immediate results must resort to an examination of the centrifuged fluid by stain for the tubercle bacillus Even here one would think that uniform results would be obtained Marfan found bacilli only in exceptional cases, Heubner had similar results Friedjung found them frequently, Kohts in 50 per cent of the cases, Pfaundler in 70 per cent of the cases, Schlawyk and Manicatide in 16 of 19 cases Lichtheim found the tubercle bacillus always present Pfaundler found the bacilli more readily in the later periods of the disease (75 per cent) than in the early stages (33 per cent) Our own cases seem to show that though in the later stages of the disease the bacilli may be more abundant, their presence in the early stages can be verified by patient search of the fluid

I have intimated in this paper that in 52 cases of tuberculous meningitis I have been able to make a diagnosis clinically in the majority of cases without the aid of what may be considered our most valuable precise diagnostic method, that of lumbar puncture. In other words, lumbar puncture in the majority of my cases was performed after the diagnosis of tuberculous meningitis had been made as a possible condition The

fluid withdrawn was then examined as to the presence or absence of tubercle bacilli

I have left this procedure for more detailed consideration because I wish to show that it is possible with moderate certainty, to make a diagnosis of tuberculous meningitis early in the disease from a consideration of clinical methods which I am describing No case of tuberculous meningitis should be positively considered as such until it had been studied for some length of time, a few days at least, because first appearances are always deceptive, and such a diagnosis once made is quite a serious blow to the friends of the patient. We should be exceedingly cautious, therefore, not to fix the diagnosis of tuberculous meningitis without the aid of an extended previous study of the case either through another physician or our own study at the bedside Once having made a diagnosis of its possible presence, we may then proceed, and then only, to make a lumbar puncture in order to fix the diagnosis beyond equivocation

I have never made a lumbar puncture in these cases without feeling that a meningitis of some kind was present. In other words, lumbar puncture should be resorted to only as a means of confirming or excluding the presence of a disease whose prognosis is hopeless In this respect is it valuable to the friends of the patient? It is in tuberculous meningitis, especially, that much confusion has resulted on account of the various data given in different clinics as the result of the careful examination of the fluid obtained by puncture Personally we consider that lumbar puncture is an absolutely certain means in a majority of cases of confirming the diagnosis of tuberculous meningitis, for we feel that in the majority of the cases tubercle bacilli can be found in the puncture fluid if care and diligence be exercised. The fluid, of course, must be drawn so as to be free of the mixture of blood, and a certain amount of experience is necessary to succeed in this respect. It must then be carefully centrifuged in order to examine the sediment During the past five years we have examined 66 successive cases, of which two were doubtful, diagnosed clinically as tuberculous meningitis with a view of detecting tubercle bacillus in the puncture fluid In 42 cases we have found the tubercle bacilli I may say here that one man alone examined all fluids, and it is due to his patience that we have been able to prove that a diagnosis is possible in the majority of cases from the examination of the puncture fluid Dr Bernstein of the Mt Sinai Hospital staff has devoted his time to this study, and a more detailed account of this work can be found in a monograph recently published by him

In previous years we have not been successful in obtaining positive results in the examination of the puncture fluid and we feel that this has been due to a faulty technic In the years 1904 to 1906 29 cases diagnosed as tuberculous meningitis revealed tubercle bacilli in the fluid of puncture in 24 In two of these 29 cases a diagnosis was not fixed positively at the time of puncture Thus in 24 of 27 cases punctured tubercle bacilli were found as confirming the clinical diagnosis In those cases, it may be mentioned incidentally, in which tubercle bacilli were not found in the puncture fluid, the laboratory was kind enough to inject this fluid into guinea-pigs, and in this way secured a positive result This however, was in an early period of our studies on the disease

Thus it may be said that, given a case which clinically leads us to surmise the presence of tuberculous meningitis, a lumbar puncture is the most valuable aid we have to fix the diagnosis beyond a doubt, because in the majority of cases tubercle bacilli can, by patient search, be found in the fluids

In some cases tubercle bacilli are not found during life in the puncture fluid, but are found in very large numbers in the fluid withdrawn from the subarachnoid space after death This can be explained by the fact that during life there is a constant circulation wave present in the subarachnoid space, which keeps the tubercle bacilli in equal suspension, thus few tubercle bacilli will naturally escape discovery After death this circulation wave ceases, a sedimentation of the bacilli takes place, especially in the bottom of the spinal canal, and are thus easily withdrawn in the puncture fluid

We have studied also the cytology of the fluid obtained by lumbar puncture in tuberculous meningitis This cytology we have tabulated in 18 cases as follows

Cytology of the Fluid Obtained by Lumbar Puncture 19 Cases of Tuberculous Meningitis

Per cent. Polynuclear cells.	Per cent. Mononuclear cells	Per cent. Polynuclear cells	Per cent Mononuclear cells.
5	95	50	50
	100	5	95
20	80		100
10	90	3	97
15	85		100
10	90	3	97
30	70	30	70
10	90	15	85
8	92	35	65
8	92		
Albumin.	**Sugar**	**Albumin.**	**Sugar**
+	0	+	0
+	0	4m	0
+	0	+	0
?	0	+	0
—	—	+ ½	0
+ 3m	0	+	0
3m	0	5m	0

Fourteen cases examined for sugar 0 and albumin increased.

The cellular content of the fluid obtained by lumbar puncture in cases of tuberculous meningitis has been studied by Widal, Sicard and Ravant and shown to be not only of great interest, but also of diagnostic import. Their studies have been enlarged by Lenhartz, Pfaundler, Councilman, Wentworth and others It may be stated that in the fluid obtained from cases of tuberculous meningitis there is a predominance of the lymphocytes in the greatest number of cases The rôle played by the polynuclear leucocytes has been a matter of much discussion and it has been shown that in rare cases the polynuclear leucocytes may predominate in the fluid obtained by the puncture Bernheim, Moser and Marcon-Mutzner have published such cases It may be said, however, that this polynuclear picture is not a primary one in tuberculous meningitis It is found either in the latter stages of the disease when there is a great invasion of the tubercle bacilli into the diseased area or in cases in which there is a mixed secondary infection At all events polynucleosis coincides with an invasion of an increased number of tubercle bacilli or the breaking down of old caseous areas and thus numbers of bacilli are set free into the cerebrospinal fluid so that an error which might be at first made by a misrepresentation of the proportions of polynuclear leucocytes is rectified by the easy discovery of tubercle bacilli in the puncture fluid On the other hand lymphocytosis of the puncture fluid has been [illegible] exceptionally in cases of meningism in typhoid fever in the serous meningitis of bronchopneumonia [illegible] enteritis in the cerebral tumor and in the adult [illegible] syphilitic meningitis (Widal) He never [illegible] facts

may disappoint us as to the primary pathognomic significance of a lymphocytosis of the cephalorachidian fluid, we still can feel that in the presence of symptoms pointing clinically to a tuberculous meningitis a predominance of lymphocytes in the fluid obtained by lumbar puncture is of great value in coming to a definite conclusion as to the nature of the process in the meninges It certainly rules out certain acute purulent forms of meningitis Thus in our list of 19 cases 17 showed a predominance of lymphocytes to the extent of 70 per cent or more In this we must not forget that in the so-called forms of basic meningitis (cerebrospinal acute) we may in the chronic stages obtain a lymphocytosis In such cases, however, the history will aid us in coming to a conclusion as to the significance of the lymphocytosis Thus it may be said that a polynuclear leucocytic predominance is certainly indicative of the acute suppurative forms of meningitis, the presence of an excess of lymphocytes in the puncture fluid to the extent shown is strongly in favor of a tuberculous process

Of interest chemically are the facts that normally the cerebrospinal fluid contains a substance which reduces Fehling's, but does not rotate polarized light, this is absent in cases of tuberculous meningitis There is also in tuberculous cases an increased amount of albumin in the cerebrospinal fluid, Arthus finds almost always a substance called serine We will not dilate on this aspect of the question of composition of the cerebrospinal fluid, as it seems to have as yet a limited practical clinical bearing Of 14 cases examined for me all contained an increased amount of albumin and in none was glucose present

THE DIAGNOSIS

It will be seen from what has been said that the diagnosis of tuberculous meningitis in the early stages of the disease is feasible to-day, whereas it was well nigh impossible formerly The slow onset interrupted by periods of irritability, etc, the irregularity of the pulse and respiration, the low or normal temperature, the absence of hyperesthesia, the lack of appetite, the discovery of hydrocephalus by percussion of the skull as described, will all lead us to establish a meningitis of the tuberculous type. If after this we can obtain by lumbar puncture an examination of the subarachnoid fluid, in the majority of cases, we will fix the diagnosis beyond a doubt. The examination of the fundus of the eye for changes which accompany tuberculous meningitis in the initial stage, although successful in a certain proportion, as has been shown in this paper, leaves us without any positive data in the majority of cases

If we compare what has been said with what is known of the onset of several forms of meningitis, especially those of the cerebrospinal meningococcic or pneumococcic type, we will see that there can be no question, certainly in the vast majority of cases, as to the possibility of making a diagnosis Aside from the examination of the puncture fluid, the onset in the acute forms of meningitis of the epidemic type is always abrupt and unmistakably so The high temperature also in the acute cases of the suppurative type, the rigidity, the constant presence of a Kernig, and the active hyperesthesia will complete the picture

More difficult, it seems to me, will be the diagnosis as to the specific form of meningitis in children below two years of age who have been sick for some length of time. In these cases we know that the posterior basic forms of meningitis with their low or normal temperatures, the hydrocephalus, the low leucocyte count, the lack of hyperesthesia, the absence of anything even in the puncture fluid in some cases to aid us in a diagnosis, will make us fall back on the history of the case as to its acute onset before we can conclude whether we have a tuberculous process present or a chronic condition following an acute attack of cerebrospinal meningitis

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INTERMITTENT TICK FEVER

PRELIMINARY REPORT ON A NEW TYPE OF FEVER DUE TO TICK BITE (IXODIASIS) *

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The older physicians in the Rocky Mountain regions have always insisted that there is a special type of fever indigenous to this section of the country This fever or, as it appears to me, groups of fevers, has been given various names, but principally that of mountain fever The group has simply been dismissed in recent years, although many good observers still hold that there is a type of fever which is neither malaria nor typhoid It has been very generally held that exact laboratory methods would place these supposed specific fevers as aberrant types of one or the other of the two diseases

A beginning has been made, however, in the description of the "Spotted Fever of the Rocky Mountains" This affection is now generally conceded a specific nature So far as known it is very closely limited to narrow tracts of country and has a dreadful mortality rate It has been assumed, although on insufficient evidence, that the disease is a form of ixodiasis It also seems likely that here there may be a question of more than one disease, since very dissimilar cases without eruption have been assumed to be mild forms of the more severe disease.

Careful laboratory investigations with the fevers at this post gave most unsatisfactory results Time and again marked remittent and intermittent fevers were encountered and the blood examinations remained negative. As a result a discouraging number of entries accumulated on the sick report with the diagnosis "Fever, type undetermined." It was finally noticed that these fevers came in little groups Then that the men affected had all recently returned from the vicinity of the maneuver reservation where they had gone either on fishing pass or on practice marches Finally it was observed that all these men had been bitten by ticks and, indeed, a number of the men ascribed their fever to these tick bites Working with these clues, much corroborative evidence was easily found. Then an opportunity arose to study six cases of fever arising in a party of eight men These men had all been on pass in the mountains, and, of the eight, the six taken down with the fever had been bitten by ticks Four of these six cases are here reported Since that time the connection between the tick bites and the following fever has been frequently demonstrated In July, 1906, there were under observation and study, in the post, three severe cases of tick fever developing in a party of five people who spent one night camping in the tick region These cases are all identical with those to be described later

* Special report to the Surgeon General U S Army published by his authority

I believe that the connection between the tick bite and the fever is indubitable

The region in which the men from this post have become infected is that section embraced in the headwaters of the three small streams which go to make up Crow Creek A large portion of this territory is in the maneuver reservation

From observations made here it appears necessary to produce the infection, whatever it is, that the tick should fasten itself on the skin of the patient. In other words, that the rostrum of the insect should become imbedded It also seems likely that the number of ticks biting the patient has some influence on the severity of the following attack, although on this point I am not entirely clear Certain it is that in one of the sharpest cases (Case 5) observed here the patient had the largest number of imbedded ticks Twelve in all had fastened themselves into this man's skin In all the cases not only was there an undoubted history of tick bites, but there was distinct evidence of the bite at the place where the insect had been attached In many of the cases small nodules had formed at the point of attachment of the insect. These nodules persisted for weeks They were hard, pale and quite painless and varied in size from that of a pea to a small marble In other cases the location of the bite was marked by a small red papule From a number of these papules the rostrum of the insect was recovered In these the rostrum had evidently been torn off and left behind in improper attempts at removing the ticks Beyond the conditions here described there was no local reaction to the bite of the tick Particularly were there none of the sharp local reactions that are sometimes described, amounting in some cases to cellulitis or abscess formation [1]

A number of specimens of the tick were collected and sent to the office of the surgeon-general for identification on June 25, 1905 The ticks were referred to Dr Charles Wardell Stiles of the Public Health and Marine-Hospital Service, who tentatively identified them as *Dermacentor andersoni* This is the same tick which is supposed to be associated with spotted fever Since that time I have had considerable correspondence with Dr Stiles on the subject of the exact identification of this parasite with particular reference to its differentiation from *Dermacentor occidentalis* (Marx) He wrote me under date of March 5, 1906, that he has recently had an opportunity of examining all the original type specimens of *Dermacentor occidentalis* and finds that it is identical with *Dermacentor andersoni* As the *Dermacentor occidentalis* has priority, the name Andersoni which he gave this special tick must be suppressed. The definite identification of the tick is, therefore, *Dermacentor occidentalis*

GENERAL DESCRIPTION OF THE DISEASE.

Generally the cases correspond to one type After a short period of incubation, with brief and ill-defined prodromal symptoms, the attack is ushered in by a chill Beginning slightly before the chill there is nausea or vomiting and intense pain in the muscles and joints, increasing with the appearance of the chill and becoming more severe with the rise of temperature The chill lasts two or three hours, and with it a febrile movement begins, lasting, as a rule, forty-eight hours although in exceptional instances it may only last twenty-four hours Then a remission occurs and the temperature falls nearly or quite to the normal The duration of the remission is about forty-eight hours, following which the same cycle is repeated

As observed here the disease consists of from three to seven such paroxysms, after which the patient, barring a pronounced anemia, is well There is another type, but not so common as that just described, in which after the initial chill the temperature rises, ladder-like, for two or three days These cases have more marked prodromes and more marked abdominal symptoms (abdominal tenderness and enlargement of the spleen) and present a clinical picture which is, at first, extremely suggestive of typhoid fever

PERIOD OF INCUBATION AND PRODROMAL STAGE

The period of incubation varies between three and seven days In the majority of cases the initial paroxysm developed four days after being bitten by the ticks In one case only was the period reduced to three days, and in one no symptoms developed for seven days

Nearly all the patients went through an ill-defined prodromal period marked by languor, malaise, fleeting pains in the muscles and joints, headache more or less severe, nausea and vomiting Following these symptoms the attack itself begins with the chill

THE ATTACK

Initial Chill—The initial chill is present in all of the cases It is severe and lasts from two to three hours It is not an active chattering chill, like the cold stage of malarial ague, but is accompanied by much more discomfort and acute pain. Nausea and vomiting, even if not prominent during the prodromal period, now become marked Following the chill there is a subjective sense of heat, although the actual rise of temperature begins with or shortly after the chill After two or three hours there is a moderate sweating stage With the beginning of the chill the headache and pains in the bones and joints become very severe The patient is acutely miserable and suffers quite as much if not more than in the painful phases of dengue or epidemic influenza, certainly much more than in the ordinary benign malarial infections

The Paroxysm—The fever rapidly rises to 103 or 104 F, and remains high with narrow fluctuations for forty-eight hours in the ordinary type of paroxysm In some few cases the febrile stage only lasts twenty-four hours After this stage is passed an intermission or remission occurs, during which the temperature falls to or near the normal In this stage, as a rule, the patient is quite comfortable The severe headache and bone and joint pains disappear Nothing remains but a feeling of exhaustion and weariness This intermission lasts forty-eight hours, thus completing the cycle, when a second chill takes place and the second paroxysm begins and terminates as the first, a two day fever and a two-day intermission The succeeding paroxysms after the second are apt to be progressively milder Very exceptionally this rule of periodicity is altered and there is a one-day fever, but always then with a three-day intermission, in the large majority of cases however, the two-day fever and two-day intermission obtains

Abdomen—Generally there is pain and some degree of tenderness distributed over the entire abdomen but nowhere very severe In two cases there was a slight degree of meteorism with gurgling in the right iliac fossa The tenderness is perhaps a little bit more pronounced over the hepatic and splenic areas No enlargement of the liver could be certainly demonstrated.

1 Vide Anderson's and Stiles' reports.

On the other hand, enlargement of the spleen with tenderness can be shown almost from the beginning, although moderate in extent As has been already stated, a few cases presented rather more marked abdominal symptoms and, together with a creeping temperature, made at first a picture extremely suggestive of typhoid fever

Urine—Nothing unusual was found in the urine of any of the patients Numerous examinations showed some high specific gravities and the usual conditions found in febrile urines

Blood—Particular attention was paid to the study of the blood and careful search was made for the so-called *Piroplasma hominis* (Wilson and Chowning, 1903) or some allied form Some few objects were found resembling the published descriptions and drawings in Anderson's report[2] A very careful study of these bodies leads me to the conclusion that they are either artefacts or, more likely, evidences of vacuolization of the erythrocyte with deposit of the staining materials in the margins of the vacuole It seems to me that Craig's[3] criticism of *Piroplasma hominis* is probably entirely correct It impresses me that the evidence

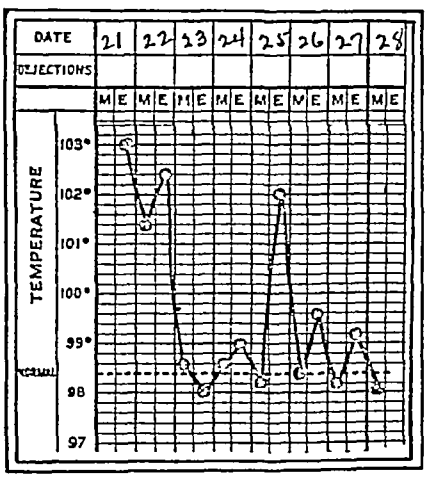


Chart 1—Illustrating the temperature in Case 3

on which the validity of *Piroplasma hominis* rests is very insecure, and for that reason very little importance was placed on similar appearances in the blood of these cases

There is a constant and progressive fall in the number of red cells This fall was constantly observed and, paroxysm for paroxysm, is certainly as marked as the red corpuscle loss following severe malarial seizures In some of these cases a numerical loss of almost 20 per cent followed one seizure Particular attention is invited to the blood chart in Case 5, in which a daily complete blood study was made In this case it will be observed that three two-day paroxysms resulted in a fall in the number of red cells from 5,800,000 (which is considered a fair normal in this altitude, 6,200 feet) to 2,600,000 The loss is apparent not only in the faces and mucous membranes of the patients, but also in the appearance of the blood drops taken for examination The pallor and poverty of the blood is very apparent to the naked eye The loss is replaced slowly and for two months in the patient whose chart is here shown there was well-marked anemia

The hemoglobin loss follows the diminution of red cells very closely Therefore, the color index is not much disturbed In this chart the hemoglobin fell to 48 per cent. (estimation with Dare hemoglobinometer) The restitution of the hemoglobin to normal is somewhat slower than the restitution of the red cells Consequently during convalescence the color index is slightly minus

With regard to the leucocytes no decided finding was made other than an increase in one type of cell It is evident that there is no marked leucocytosis, although nearly all the cases showed a slight increase in their numbers Differential counts showed a constant moderate increase in the large mononuclear cells which in numbers amounted not only to a relative but also to an absolute increase in their numbers Six differential counts in Case 5 resulted as follows

Polymorphonuclear	76 6	77	72	71	73	72
Large mononuclear	12 4	13 6	15 6	16 5	15 6	16 6
Lymphocytes	9 6	9	11	12	10	11
Eosinophiles	8	4	9	6	8	4
Mast cells	6	0	5	0	6	0
	100 0	100 0	100 0	100 0	100 0	100 0

This leucocyte formula is suggestive, since considerable stress has been laid on the significance of a marked increase in the large mononuclear cells in malaria In the so-called human piroplasmosis (spotted fever of the Rocky Mountains) Anderson gives the following formula averaged from two counts in a case observed by

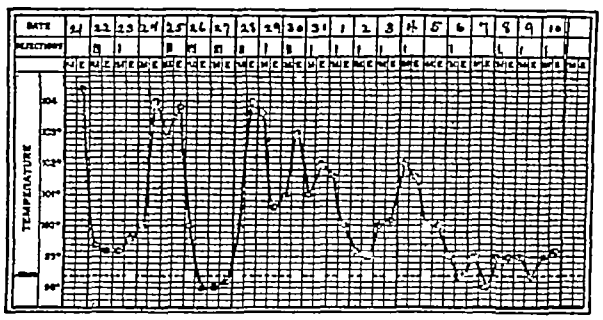


Chart 2.—Illustrating the temperature and remissions in Case 5

him, and it will be seen that the leucocyte change in this, too, is similar

Polymorphonuclears	77 7
Large mononuclears	11 4
Small lymphocytes	10 0
Eosinophiles	9
	100 0

The agglutination reaction with the bacillus of typhoid fever was carefully and repeatedly looked for in each case, and in all the examinations were negative. Search for malarial parasites was also made in all the cases and in none were any found

TREATMENT

Quinin was administered in all the earlier cases without any apparent effect. I believe that it increases the subjective discomfort It certainly has no beneficial effect either on the paroxysm directly or in the line of preventing its recurrence I am quite convinced that arsenic has a controlling and curative effect on the disease, particularly when used subcutaneously or intravenously The subcutaneous injections are in my opinion, distinctly to be preferred to the intravenous but are apt to be followed by annoying burning which lasts from fifteen to thirty minutes The best formula is Kobner's and if a little cocain be added to it the burning will be prevented, thus

2 Bulletin 14 Hygienic Laboratory Public Health and Marine-Hospital Service
3 Amer Med Dec. 10 1904

℞	Sodii Arsenitis	0 1
	Cocain Hydrochlor	0 4
	Aquæ	10 0

This solution should be sterilized and is used in a dose of from 1 to 2 c c twice daily After the acute phases the blood deterioration must be met by smaller doses of arsenic or by the administration of the ordinary iron preparations

Brief case histories of the six patients on sick report and of one case occurring in the post this year are here appended

CASE 1—G B, private Eighth Battery Field Artillery, born in Michigan, 1870, in the service 2 9/12 years Family history negative

Previous Personal History—Diseases of childhood. Chan croids one year ago

Present Illness—He left post for the reservation on June 10, and returned on June 12 On the morning of June 12 he found five ticks attached He had a severe chill on Friday, June 16, lasting about two hours, with severe headache and severe pain in all the bones and joints He had fever all that day and the next, and then had two good days, during which he complained of feeling dragged out He was admitted to sick report at the beginning of the second paroxysm, with a tem perature of 102 3 F Altogether he had six paroxysms of the two-day fever type with two-day intermissions On the whole, this was a mild case.

CASE 2—F P P, private Eighth Battery Field Artillery, born in Kentucky, aged 24, in the service 2 10/12 years Family history negative.

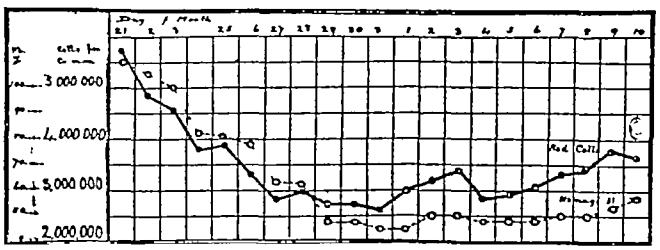


Chart 3—Blood chart in Case 5 The solid line shows number of red cells the broken line shows hemoglobin percentage.

Previous Personal History—Operation for appendicitis three years ago, recovery complete

Present Illness—He went to the reservation on June 10 and returned on June 12 During his stay there and after his return to the post he found six ticks attached He had a severe chill on June 16, with fever, headache, and sore joints The next chill was on Monday, June 19 It lasted three hours, with the same symptoms as before, with the addition of vomit ing The patient was admitted to hospital during the fourth paroxysm On admission the places where he had been bitten were marked by hard, pale nodules the size of a pea Five such nodules were found and one papule from which the ros trum of a tick was extracted There was a marked anemia. The red cells numbered 3,050,000, hemoglobin, 60 per cent. This attack was apparently cut short by arsenic

CASE 3—A M T, private Eighth Battery Field Artillery born in Ohio, aged 25, in the service 7/12 years Family and previous history negative

Present Illness—He went to the reservation on June 10, returning on June 12 On June 11, Sunday, several ticks fastened on him, just how many he does not know He had a severe chill with nausea, fever, headache and pain in the bones on Thursday June 15 The chill lasted four hours and the fever all through the next day he says The next chill was on Monday, June 19 He was admitted to hospital in his third paroxysm and had one more after entering, making four in all On admission there were clear marks where four ticks had attached themselves to the skin Chart 1 shows the last two attacks The blood loss was moderate

CASE 4—J S, private Eighth Battery Field Artillery born in Ohio, aged 23, in the service 9/12 years Family and previous history negative

Present Illness—He went to the reservation in company with the three other men on June 10, returning to the post on June 12 Some time on June 11 three ticks attached them selves to the skin He had a chill with nausea and fever on June 14 and slight chilly sensations with fever on the fifteenth The next two days he felt quite comfortable. Then he had another hard chill and thinks that the fever lasted three days with two days in between, when he felt tired out, but thinks he had no fever On June 23 he had his third attack, for which he entered the hospital

This was a mild case and complete recovery was fairly rapid The blood loss was moderate

CASE 5—C R., lance corporal, Hospital Corps, U S A Family and previous history negative

Present Illness—He went to the timber reservation on fish ing pass on July 14 On the 15th several ticks bit him and the next day several more, in all twelve. He had a very severe chill on July 20 with nausea and vomiting After the chill he had a severe fever and pains in the head and all the joints The chilly sensations continued all that day and the following morning The afternoon of July 21 he was admitted to hos pital with a temperature of 104 2 F He had then an active delirium The second paroxysm occurred on July 24 and a third on July 28 After this third paroxysm the temperature remained continuously above the normal for several days and the usual remission did not occur until August 2 A mild at

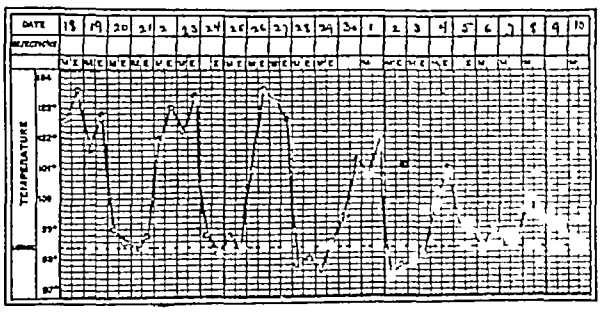


Chart 4—Illustrating temperature and remissions in Case 7

tack was observed on August 4 Chart 2 shows the tempera ture changes in this case, and Chart 3 the blood changes This man was acutely ill and in about ten days had developed a profound anemia which is shown in Chart 3 For two months following the attack he was weak and pale and the blood re covery was slow and tedious During the second week of his illness his disease represented what I have described before as the typhoid type with considerable abdominal tenderness, enlarged spleen and continuous though irregular temperature

CASE 6—S E B, trumpeter, Company B, Eleventh Infan try Family and previous history negative

Present Illness—This man was in the party with the patient in Case 5 So far as he remembers six ticks fastened on him although on admission to hospital only three papules could be found and one hard little nodule to show where the in ects had taken hold The initial chill came four days after but was not severe Three days later he had a second chill and on July 24 a third chill All these were accompanied by fever headache and general aching and soreness He was admitted to hospital in his third chill and he had a fourth and fifth paroxysm He was not clear in his own mind as to how long the the first three attacks had lasted The fourth and fifth attacks however were of the one day fever [illegible] three-day intermission This case was a mild one [illegible] tailed principally on account of the variation in the [illegible] of the attacks The length of time in the [illegible] from the beginning of one attack to the beginning of the [illegible] instance the attack lasts but one day [illegible] three days This phenomenon is [illegible] ated infection or to a decline in the virulence of the [illegible] the end of the disease approaches

Case 7 —Miss S, aged 24, white, female, unmarried Personal history negative, has never had malaria or any other fever

Present Illness—On June 14 she went with a fishing party to the dam in the reserve On the 15th several ticks fastened on her Three of these she pulled away forcibly and a fourth, she says, came off without any trouble On the 18th she had a severe chill with nausea and vomiting For several hours before the chill she had felt languid and had a slight nausea She also had a slight headache With the chill she had high fever and became delirious. The following day the fever had remitted about one degree (Chart 4) and the delirium had passed away, but she suffered very greatly from headache and pains all over her body At this time two red papules were noticeable at a point near the right anterior superior spine of the ilium From both of these the rostrums of the offending ticks were removed There was another papule on the right chest and two between the shoulder blades In one of these latter the rostrum of a tick was also imbedded During the second day there was considerable tenderness over the entire abdomen, possibly a little more marked over the right iliac fossa, the liver and the spleen The liver was not enlarged The spleen was moderately enlarged and rather tender on deep pressure. On the third and fourth days the fever became almost normal, and the patient said that she felt well, although greatly weakened The second paroxysm began on the fifth day, and the subjective symptoms were, if anything, more severe than in the first attack From that time the course of the disease, as may be seen from Chart 4, was typical, the two day fever periods and two day intermissions continuing through six cycles In this case there was considerable loss of weight, as well as a very severe anemia The blood conditions in this instance have not yet been fully worked out.

IS SCARLET FEVER A STREPTOCOCCUS DISEASE?

LUDVIG HEKTOEN, M.D
CHICAGO

Since the earliest application of microbiological methods to the study of scarlet fever the streptococcus has claimed the lion's share of attention Its significance has grown as the observations have extended At present the streptococcus is held by some to be the actual cause of the disease, while others, and I think the majority, look on it as essentially a secondary invader on which, however, depends to a large extent the fate of the patient

For the purpose of discussing this question it is necessary first of all to consider the occurrence and the distribution of streptococci in scarlet fever Numerous investigations[1] have indicated that streptococci occur on the tonsils of scarlet fever in far greater abundance than in health In his study of the bacteria of the throat and skin in scarlet fever Weaver calls special attention to the enormous numbers of streptococci in the throat in this disease and to their gradual disappearance as convalescence progresses For various reasons, but principally because of the lack of convenient means, most of the studies of tonsillar streptococci give few details in regard to the cultures obtained On this account G F Ruediger[2] last year made a careful detailed study by means of the newer methods, of the streptococci and diplococci in the throat in scarlet fever, certain other diseases, and health Ruediger made use of the blood-agar plate method of Schottmüller and Rosenow On the blood-agar plate *Streptococcus pyogenes* produces small gray colonies, surrounded by a perfectly clear area of laking, while the colonies of certain other chain-forming cocci and of pneumococci are green His results must be considered as striking because they show that *Streptococcus pyogenes* is constantly present in great abundance on the tonsils of patients with scarlet fever and with simple tonsillitis before the throat symptoms begin to subside He found *Streptococcus pyogenes* in small numbers only in 59 per cent of the 51 normal throats he examined, while pneumococci and the large groups of organisms (*Streptococcus viridans*) that lies between *Streptococcus pyogenes* and the pneumococcus were found in about equal numbers in the normal and the scarlatinal throats, thus showing that constant presence on the tonsils of *Streptococcus pyogenes* in large numbers is an outstanding feature of scarlet fever

From the throat streptococci frequently pass to neighboring structures and give rise to more or less serious complications They may also reach the circulating blood and cause streptococcemia as well as various internal and articular localizations

In 100 unselected cases of scarlet fever in which I examined the blood systematically during life, streptococci developed in the cultures from cases, all of which recovered, although several were very ill[3] In Jochmann's series of 161 cases streptococci were recovered in 25 patients, all of whom died[4]

By way of explanation of this divergence I may point out that my cases occurred in a mild epidemic, were strictly unselected, most of the patients being over 10 years of age and many over 20, whereas Jochmann's cases occurred in a frightfully severe epidemic, the patients being children under 10 and probably not strictly unselected All observers agree that in fatal scarlatina general streptococcus infection is demonstrable after death in the large majority of the cases Baginsky and Sommerfield[5] report streptococci in the blood and the internal organs of every one of 82 patients, including several in whom death occurred early and in whom there were no gross lesions In other series general streptococcus infection was presented in a smaller percentage of the cases (Wright, Pearce, Slawyk, Jochmann, etc), and several instances of fatal fulminating scarlatina have been described in which there was no demonstrable evidence of serious streptococcus infection (Bohm, Jochmann) In general streptococcus infection *Streptococcus pyogenes* appears to be the predominating form, occasionally, however, we meet *Streptococcus viridans*

Now, if streptococci play an essential and constant part in scarlet fever as, indeed, seems to be the case, then we would expect to find in the blood of the patients various specific antibodies of streptococci, more particularly agglutinins and opsonins And in case the streptococci concerned in scarlet fever differ essentially from other streptococci we naturally would hope to find in these biologic reactions means of differentiating between them

As a matter of fact, various observations have been made on the agglutination of streptococci by scarlatinal and other serums, but the results lack the desired uniformity In an important article on the subject Weaver[6] has pointed out that this in part may be due to technical difficulties and in part because it has not been recognized adequately that variations in the composition

1 For references to the literature see Weaver Trans Chicago Path Soc. 1903 v 222 and Jour Med. Research. 1903 ix. 246
2. The Jour A. M. A., 1906, xlvii, 1171, Jour Infect. Dis., 1906 iii, 755
3 The Journal A M A. 1903 xl 685
4 Ztsch klin Med 1905 lvi 316
5 Arch f Kinderheilkunde 1902, xxxiii, 1.
6. Jour Infect. Dis, 1904, i, 91

and reaction of the culture medium have a marked influence on the agglutinability of streptococci

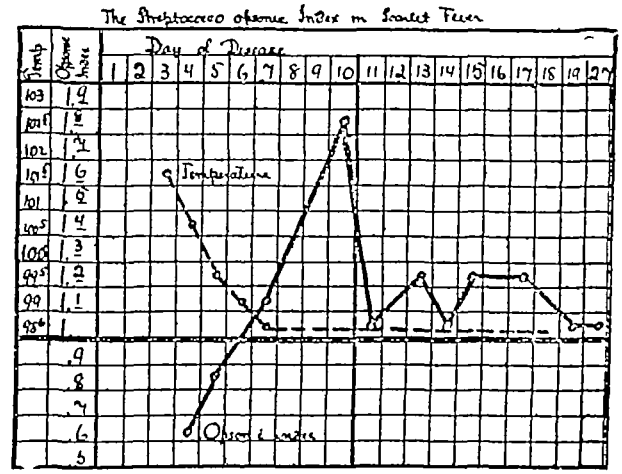
In general Weaver's results show that in scarlet fever agglutinins develop for streptococci, but that these agglutinins are not specific for streptococci obtained from cases of scarlet fever, and like agglutinins form to an equal degree in erysipelas and even in pneumonia and probably other infections not necessarily streptococcal We see then that as the matter now stands no decisive conclusions are indicated by the agglutination of streptococci by scarlet fever serum as to their relation to scarlet fever The scarlatinal streptococco-agglutinins should be studied still more closely in the hope of obtaining results of more positive significance Thus, it is quite possible that fairly characteristic relations may be found to exist between the agglutinin curve and the course and character of the attack Experiments with the serums of animals immunized with streptococci have given results that in some instances are rather suggestive of a degree of specificity on the part of scarlatinal streptococci Ruediger found that most strains of *Streptococcus pyogenes* isolated from the throat in scarlet fever were clumped in fairly high dilutions of the serum of sheep immunized with an organism from the same source but not at all by the serum of sheep immunized with a streptococcus from phlegmon of the leg or with *Streptococcus viridans* Here also further work is necessary

As to the streptococco-opsonic index in scarlet fever I may say that a recent study in our laboratory by Miss Tunnicliff, the results of which are not yet published, indicate definitely that the index is below normal during the acute stages of the disease in the majority of cases, as the symptoms subside the index commonly rises above the normal to which the return may be more or less abrupt During uncomplicated convalescence the index is normal or a little above If complicating streptococcus localizations set in the index remains low until improvement begins These variations in the streptococco-opsonic index appear to be specific because they are not associated with corresponding variations in the opsonic index for other bacteria such as the pneumococcus, the staphylococcus, and pseudodiphtheria bacilli

From the facts presented in this condensed form we are justified in concluding (1) That the predominant feature of the bacteriology of the throat in scarlet fever is the constant presence of large numbers of *Streptococcus pyogenes,* (2) that the overwhelming majority of the so-called complications and of the deaths in scarlet fever are due to invasion of the tissues and the blood by this microbe, and (3) that in scarlet fever, even when mild, the organism gives evidence of systemic reaction to streptococci by variations in the streptococco-opsonic index and probably also by the formation of streptococco-agglutinins There is, therefore, no escape from the conclusion that *Streptococcus pyogenes* or some form thereof plays a most significant part in the scarlatinal process, but are we ready to take the final step and to conclude that scarlet fever is wholly a streptococcus disease, all the phenomena of which, including the acquired immunity, are satisfactorily explained by the distribution of the cocci in the tissues and by the intoxication with their products?

It is quite true that many of the essential phenomena of scarlet fever, such as the initial symptoms the angina, the fever, the leucocytosis, and even the rash may be explained by what we already know of the pathogenic powers of *Streptococcus pyogenes* and which probably in no small degree actually shares in their production, but there is no analogy in recognized streptococcus infections of the immunity conferred by scarlet fever even when mild We have no evidence that scarlet fever leaves behind it any lasting immunity to streptococci, and we do know that the specific immunity which results from streptococcus infections in general is not at all marked and is only brief in duration Consequently if scarlet fever is caused by a form of *Streptococcus pyogenes* this must be assumed to possess very pronounced and peculiar immunizing properties, of which as yet we have been unable to discover definite experimental or other evidence There are other phases of this question that might be discussed with profit did space permit For example, there is the reported lack of evidence of streptococcus invasion in certain instances of fulminating scarlatina

Let us now for a moment consider acceptance of the streptococcal theory of scarlet fever from the point of view of the spread of the disease This acceptance would seem to involve us in no special difficulty so far as the most important of the recognized modes of dissemination are concerned, namely, through contact in various ways



with materials from the throat, it is different, however, with respect to the question of the infectiousness of the skin and the reputed longevity of the scarlatinal virus It is universally believed that the scales of scarlet fever patients are infectious far into convalescence According to Weaver's careful study, the bacteria obtainable in the skin and scales of scarlatina are quite the same as those found on the skin in health Raskin obtained streptococci from the skin in 4 cases in 20, Gordon's search yielded no positive results, Weaver found streptococci in skin cultures in one case in 15, and Dreyer (unpublished observation) failed to find streptococci on the skin of 30 cases The conclusion is plain—if streptococci cause scarlet fever they reach the surface of the body so rarely that the infectiousness of the skin must be greatly overrated Medical literature contains numerous instances of apparent conservation of the scarlatinal virus over long period of time—several years—whereas the longest time that Weaver could cultivate streptococci from preserved scarlatinal material was 90 days

Thus it becomes evident that there are rather definite obstacles to the unreserved acceptance of the streptococcus theory of scarlet fever The [illegible]

specific cause of scarlet fever is not known[7] and that the streptococcus is a concomitant or secondary invader for the growth and activity of which the conditions in this disease are peculiarly favorable, seems to me to harmonize better with the facts now at hand This view receives strong support from the fact that smallpox when fatal is practically always associated with streptococcus invasion,[8] so that the suggestion has been made that smallpox, too, is a streptococcus disease[9] Perkins and Pay[10] dispose of this claim, however, by causing smallpox in the monkey with materials entirely free from streptococci, which by themselves, as expected, have no such effect[11] It has been said that smallpox would be a relatively harmless disease were it not for the streptococcus invasion, and there are certainly good reasons to look on scarlet fever in the same light

From the fact that there is no evidence in scarlet fever of increased activity on the part of pneumococci and certain related cocci that normally inhabit the throat, we may infer that the conditions in the scarlatinal throat are peculiarly favorable to *Streptococcus pyogenes* Indeed, in view of the paramount importance of streptococci in the course and outcome of scarlet fever the chief significance of the pure scarlatinal virus would seem to lie in its power to open the door, so to speak, to streptococci From this point of view the need for potent antistreptococcus remedies is as urgent and their eventual specific effects as logically explainable as would be the case were scarlet fever considered a streptococcus disease pure and simple

One point remains In view of the fact that streptococci grow in virulence in the susceptible animal organism it becomes our duty to guard carefully by adequate isolation against the transfer of especially virulent strains from patient to patient We can understand from what we know of the dissemination of throat and mouth bacteria in coughing and other ways the great chance for such transfer when patients lie side by side in the same room Perhaps the sad instances of several deaths from scarlet fever of children of the same family, sometimes spoken of as examples of family susceptibility to scarlatina, often result from the passage from child to child of especially virulent streptococci

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SOME SYPHILITIC DISEASES OF THE EYE

RANDOLPH BRUNSON, M D

HOT SPRINGS, ARK.

Of all diseases of the eye probably syphilis is responsible for a greater number of ocular affections than any one disease known, so I can not, in a paper of this character, go into an exhaustive study of diagnosis, prognosis and treatment, but will confine my remarks to giving the essentials of diagnosis, and take up each subject as seen from the anterior aspect of the eye

7 Whether the protozoon like bodies described by Mallory (Jour Med Research 1904 x 483), in the skin of scarlet fever the parasitic nature of which is corroborated by Duval (Virchow's Archiv 1905 179 485) but questioned by Field (Jour Exp Med. 1905 vii 343) have any etiologic significance is of course a question for the future

8 Ewing Trans Assoc. Am. Phys 1902 xviii, 208

9 De Waele and Sugg Arch. intern. Pharmacodynamie et Therapie 1903 xii 205 Münch med. Wochschr., 1905 Centrbl f Bakt I 1905 xxxix 324

10 Jour Med. Research 1903 x, 195

11 On account of incommunicability of scarlet fever to animals the investigator is without ready means to determine whether scarlatinal materials or microbes he may isolate therefrom have specific pathogenic powers.

EYELIDS

Secondary syphilitic ulcers may occur in the eyelids from the breaking down of a gumma originating in the skin or in the subcutaneous tissue and cartilage The most frequent location of the lesion is in the skin, near the lid margin or below the inner canthus, though it may occur on the conjunctival surface of the lid It manifests itself usually at a late stage of the disease and should be classified as a tertiary lesion The fact that this lesion may occur after all other symptoms of syphilis have subsided necessarily makes a diagnosis rather difficult, especially if it is situated over the lachrymal sac, in this event dacryocystitis is apt to be confounded with it. It is at times difficult to differentiate between this lesion and epithelioma, as the latter occurs more frequently on the eyelids than elsewhere

CONJUNCTIVA.

The conjunctiva is very rarely affected primarily, but inflammation usually occurs when the iris and ciliary body are involved, the edema seen in these cases being caused by an obstruction to the return flow of the circulation It has been my good fortune to see one case of gumma of the conjunctiva, this in a man 36 years old, who had been infected six years previously The patient had received treatment for about three months after the initial lesion, and in the following year also he had taken more or less treatment, but, as all symptoms of syphilis had long since disappeared, he did not appreciate the necessity of further treatment, and the gumma of the conjunctiva was a result four years later When I first saw him there was a round, hard mass, the size of a pea, glazed in appearance and almost white, situated at the sclerocorneal junction on the outer side of the right eye Though he gave me a history of syphilis, a diagnosis was not made at the time, as I was uncertain as to the character of the trouble, and I requested him to return later in the week On his return he told me that he had spent a very uncomfortable night with his eye Examination disclosed a true broken-down gumma, ulcerated, and the whole surrounding tissue deeply injected A salve of iodoform was prescribed to be used locally, and subcutaneous injections of the albuminate of mercury were begun at once, with iodid of sodium internally After twelve injections, one given daily, and taking iodid up to 225 minims per day, the gumma completely disappeared, except for a slight contraction of the tissue

For the past five years I have made a practice of examining the conjunctiva of each syphilitic coming into my office, my object in doing this was to find a mucous patch, but so far my efforts have been in vain However, I expect some day to find one, as there does not seem to be any reason why they should not be found on the conjunctiva as they are elsewhere

LACHRYMAL SAC AND DUCT

The lachrymal sac and duct is frequently invaded by syphilis through the nose In all the cases of stricture of the lachrymal canal in syphilis which have come under my observation I have always been able to find the cause in the nose Syphilitic rhinitis, both acute and chronic, is very common, and when we have great destruction of the nasal bones and membranes dacryocystitis usually occurs with varying severity

THE CORNEA.

Interstitial keratitis has its origin in syphilis in perhaps 60 per cent. or more of all cases, and the true form

is always hereditary I have never seen a case caused by acquired syphilis, and believe the cases reported as such have simply been produced by iridochoroiditis, which has involved the deep layer of the cornea Antonelli directs attention to the ophthalmoscopic appearance in congenital syphilis, namely "A certain degree of pallor, sclerosis of the papilla, a massing of the pigment on the papillary border, a certain narrowing of the retinal arteries and a granular state of the retinal pigment" The symptoms of this variety of keratitis are a grayish discoloration at the periphery or some other part of the cornea. This color soon spreads over the whole of the membrane, which is infiltrated and its surface dull At first the infiltration is translucent, it then becomes thickened and of a grayish tint, becoming darker until the iris is quite obscured There is ciliary injection without congestion of the conjunctiva, lachrymation, photophobia and ciliary pain are also present, the latter due to an iritis which is nearly always present in these cases The deep punctate keratitis of syphilis is situated in the deeper planes of the cornea, the iris, ciliary body and choroid are nearly always invaded We have numerous small, deep infiltrations appearing in front of Descemet's membrane and in the center of the cornea These infiltrations may become ulcerated in a few cases and leave very dense and permanent opacities

A word in regard to the treatment of these forms of keratitis I have never seen a case, no matter how ill nourished and cachectic the patient may have been, that small doses of mercury did not act in a most satisfactory manner from the very start It seems to exert a tonic influence

IRIS AND CILIARY BODY

The iris and ciliary body are perhaps more often invaded by syphilis than any other part of the globe, and syphilis is the common predisposing cause of iritis About 70 per cent of all cases of iritis are caused by this disease, and I have found in examining the histories of 1,500 cases of syphilis, reported in a previous paper,[1] that iritis occurred in over 3 per cent of all cases There are a certain number of cases in which the clinical aspect will not give any indication of the constitutional cause of the inflammation, so we are more or less dependent on the history of the case and other data to confirm our diagnosis In syphilis there are a certain number of characteristic signs in a given number of cases which will allow us at once to recognize the etiology of the disease The most palpable of these are the papules—small raised masses imbedded in the iris, usually not exceeding three in number and generally located in the pupillary zone, but they may be seen at the periphery of the anterior chamber, or elsewhere They begin as small points, increasing in size, until finally, in a few cases, they may attain such size as to touch the posterior surface of the cornea During this time their color changes from a reddish brown to a lighter shade, and on closer inspection we shall find numerous small vessels surrounding them They may disappear completely, or leave small arch-shaped synechiæ. A white line is not infrequently seen at the bottom of the anterior chamber, due to the accumulated debris of broken down condylomata. At the pupillary edge of the iris, a rusty hue is sometimes observed, and is probably due to condylomatous masses, diffused throughout the tissues in that position The posterior synechiæ in this form of iritis are suggestive of the etiology of the trouble, as they are broad and dark in color, thus differing in a marked degree from those of rheumatism, for instance, which are thin and light in color This then, is the iritis of secondary syphilis, which is nearly always of a plastic type and has little tendency to recur In nearly all cases attachment between the iris and the lens capsule takes place, unless the case is seen early

Hereditary syphilitic iritis appears in the first few years of life, and also at a much later period According to Hutchinson, the average age at which infantile iritis begins is five months, it affects females more often than males, attacks one or both eyes, and, though generally associated with a free exudation of lymph is not much marked by redness of the eye The cornea remains clear and the ailment is attended by few of the more severe symptoms met with in adults Most of the cases show one or more of the signs of hereditary taint—as cachexia, psoriasis-like cutaneous eruptions aphthæ or sores about the mouth, condylomata about the anus, or "snuffles" When iritis attacks other subjects it may occur alone or with interstitial keratitis If alone, the inflammation usually appears in the ciliary body and spreads to the iris at a later stage, so we have an iridocyclitis It is very hard at times to recognize as patients may show no signs of hereditary syphilis elsewhere In other cases we may find associated with it, disseminated choroiditis, which is characteristic of syphilis The iris reacts to light very sluggishly and ciliary congestion, purplish in color and patchy in distribution, is present Sometimes a pupil may get blocked by a grayish layer of debris which seems to cling to the edge of the iris, and punctate deposits constantly appear in the cornea Secondary glaucoma is a frequent sequel In hereditary syphilis, iritis assumes the form of a serous irido-cyclitis and may appear alone or with interstitial keratitis

Syphilitic cyclitis may be plastic, serous or gummatous, and is almost invariably associated with iritis, the symptoms are pain diminished vision due to deposits upon the posterior surface of the cornea precipitates in the vitreous, exudations between the iris and lens capsule, and ciliary injection Gilezowski, in studying symptoms of syphilis in the ciliary body says

1 Whenever syphilitic iritis is accompanied by punctate keratitis either chronic or recent, areas of atrophic choroiditis will be found in the ora serrata

2 In parenchymatous interstitial keratitis when due to hereditary syphilis disseminated plaques which sometimes reach the posterior segment are seen in the ora serrata, more often, however they are confined to the ciliary region

3 Diffuse syphilitic choroiditis with disease of the vitreous always presents atrophic alterations of the ora serrata and the opacities of that humor are due to the latter lesion

4 In ataxic atrophy of the discs atrophic and pigment changes occur in the ora serrata

5 In syphilitic inflammation of the cerebral or cerebro spinal nerves characteristic signs of the disease appear in the ora serrata

Gallenga reports two cases of syphilitic gumma of the ciliary body, but I have never seen a case

Before leaving the subject of irido-cyclitis I wish to make a few remarks upon the pathogenesis of primary iritis of syphilis Brailey says

Almost all ailments capable of giving rise to inflammation of the iris are intimately associated with if not actually caused by micro-organisms As regards syphilis, gonorrhœa, tubercle, leprosy influenza and relapsing fever this fact will be disputed by none Organisms have been described in many fevers—typhoid smallpox and pneumonia—during recovery from which inflammatory infections of the iris and ciliary body may occur From all the facts to the

1 Relative frequency of Iritis in Syphilis and Rheumatism observed in 3 000 cases. Ophthalmic Record, November 1899

subject, it would indicate that syphilitic iritis is due to the presence of microbes

Alexander believes that specific iritis is produced by vascular alterations, and points to the fact that Fuchs and Friedal have shown that the walls of the vessels of the iris are the seat of a gummatous degeneration Brailey states that the ordinary form of the disease appears as an early secondary symptom during the time when the specific virus is diffusing itself, by means of the blood, throughout the entire economy Nodular growths or condylomata are present in every case and are strongly suggestive of local irritation, such as might well be set up by bacilli deposited from the aqueous humor Bronmer has given particulars of three cases in which concussion of the eyeball was followed speedily by local syphilitic disease

In many cases of irido-cyclitis, the patient tells us that the disease was set up by some slight injury to the eyes A case in question came under my care some months ago

History ——— ——, aged 38 years, was walking along the street, carnival week, and a woman threw "confetti" into his face, some of which got into his left eye, producing at the time more or less irritation. Two days later, he came into my office with a typical case of specific irido cyclitis A history of syphilis was obtained, but he had never had iritis before, so it would seem that the bacilli deposited by the aqueous humor were there and only required some slight irritation to start them working industriously

RETINA.

That syphilitic retinitis, pure and simple, does exist, seems to be beyond question, as such careful and painstaking observers at Leibreich, Mooren Mauthner have reported cases, while Ole Bull reports its occurrence in half of all the syphilitic cases seen by him

We have observed in cases of severe iritis, more or less irritation of the retina During the past twelve years I have had exceptional opportunities for observing syphilitic diseases of the eye, and in this time I have seen at least three positive cases of syphilitic retinitis without the choroid or iris being involved The three cases were all due to the acquired form of syphilis, and appeared from four months to seven months after infection In one case the retinitis was preceded by iritis, but the latter trouble had entirely subsided without injury to the eye The most remarkable incident, outside the rarity of such cases, was that none of these patients had been fully under the influence of mercury, though each had been using inunctions for several weeks previous to the discovery of retinitis I will not go into the details of these three cases here, as I expect soon to make a further and more elaborate report In two cases there were dust-like particles in the posterior part of the vitreous, producing a cloudy appearance in front of the papilla In the other case this condition was absent In all there was a grayish opacity of the retina, and particularly along the course of the blood vessels, small, white foci were seen towards the periphery of the retina, developing along the course of the blood vessels, berry-like in appearance and covering the vessels in places The arteries seemed somewhat thinner, and the veins were much larger than normal

Syphilitic hemorrhagic retinitis not infrequently occurs in the course of syphilis and usually in the tertiary period of the disease Of course, the predominating clinical symptom is a great number of hemorrhagic spots of different sizes and shapes, dust-like opacities are seen in the vitreous, the retina appears opaque, the arteries are small and the veins are dark and large. Persistent headache is a constant factor in this disease until the patient is thoroughly under the influence of mercury and iodids

Relapsing syphilitic central retinitis is a very rare affection, personally, I have seen only 1 case in about 2,000 cases of syphilis which have been under my observation There is a sudden disturbance of vision, which disappears after a few days, to reappear These recurrent attacks may keep up indefinitely During the attacks the vision is much impaired At first the vision is very good between the attacks, but later it is reduced There is seen a slight shadow on the macula, but the papilla and surrounding field remain perfectly clear Fine white points appear in groups around a grayish macula and during the intervals of attacks this cloudiness disappears entirely In my case the trouble was cured after three months of heroic anti-syphilitic treatment Three years have passed since the case was first seen and there has not been any recurrent attack.

Transitory recurrent bitemporal hemianopsia may be caused by syphilitic tumors affecting the chiasm Oppenheimer regards this form of hemianopsia as a sign of basal syphilitic lesion

Swanzy directs attention to the fact, that symptoms caused by syphilitic gummata at the base of the brain are frequently inconstant, that is to say, a nerve which is paralyzed to-day, may be found to perform its functions well to-morrow, while the paralysis of some other nerve may continue In nearly all cases of hemianopsia and blindness brought about by gumma situated somewhere in the optic tract and chiasm, if the blindness is recent, we can, with a great degree of certainty, hope for useful vision, if not for entire relief This, of course, can only be brought about through heroic anti-syphilitic treatment Diseases of the blood vessels of the retina and iris caused by syphilis, while not very common, yet occur with sufficient frequency to attract attention

Syphilis not only induces inflammatory changes in the retina as elsewhere, but frequently produces changes in the blood vessels similar to those seen in senile or albuminuric sclerosis Blood extravasations, opacities of the vessels and sometimes retinal opacities are seen

In syphilis, Haab attaches considerable importance as a diagnostic sign to decrease of the retinal vessels when the opacities of the walls appear as fine disseminated scales upon the arteries He states further that other similar vessel-degenerations rarely show this appearance New vessel formation is quite frequent in syphilis and takes place after hemorrhages of syphilitic origin.

CHOROID

Disseminated choroiditis is caused by syphilis in perhaps 80 per cent of all cases In acquired syphilis the disease makes its appearance in from six to eighteen months or possibly longer, after infection In hereditary syphilis the disease comes on in the first three or four years of life, or probably at a later date In the early stages, in the acquired form, we see perfectly round white spots of a pinkish hue The retinal vessels are clearly seen as they pass over the spots The next change takes place in the center of the spot which becomes very white, at the same time the pigment ring begins to show itself and gradually becomes darker The pigment ring and other details now sharpen up and the enclosed surface appears as a dull, yellowish-white plaque Sometimes little shreds of lymph are seen during this stage attached by one edge to the choroidal plaque and undu-

lating in the vitreous Patches of complete atrophy appear, bounded by a ring of black pigment, the entire surface in this ring is white or bluish-white and glistening, and we cannot see any trace of the choroidal vessels or pigment, yet the retinal vessels go across without interruption The appearance of the fundus, between the choroidal spots, is usually normal When the inner layers of the retina become affected the case is always more or less serious and a loss of sight may take place either from atrophy of the disc or from detachment of the retina

Iritis, interstitial keratitis and scleritis may make their appearance during the course of the disease Liquefaction of the vitreous may take place with partial or complete dislocation of the lens The occurrence of a group of yellowish-white flecks near the macula and of dust-like opacities of the vitreous, with change in the walls of the choroidal and retinal vessels, is nearly always characteristic of syphilis

Syphilitic chorio-retinitis is always characterized at first by fine dust-like vitreous opacities and increased redness of the disc, which latter is surrounded by a halo of grayish discoloration There is an absence of the patchy condition characteristic of choroidal inflammation alone This form is frequently preceded by iritis Night blindness is usually a marked feature The field of vision rarely shows any marked diminution In the early stages the diagnosis is quite difficult, there is a smoky appearance of the details of the fundus, however, which is characteristic The vitreous opacities, increased redness of the disc and opacities of the surrounding retina, are frequently the only diagnostic signs

Later, as the disease progresses, there is often found overfullness of the retinal veins with a contraction of the calibers of the arteries and paleness of the disc

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POLYCYTHEMIA.

J F ALDRICH, M.D AND LE ROY CRUMMER, M.D
SHENANDOAH, IOWA. OMAHA.

The recent exhaustive articles[1] on this subject have changed our plans in considering the condition in detail and referring to the previous work which has been done on this subject, but cases are still so rare that we think it expedient to report this one in considerable detail This case seems of especial interest in that while it has the entire triad of symptoms completely developed, it differs in some important essentials from the cases previously reported

Patient—Mrs J M. D, aged 53, first seen by Dr Aldrich Jan 11, 1906, complained of considerable dyspnea on exertion She had also noticed that she had an immense growth in the left abdomen

Family History—This was negative. The father was living at the age of 86, and was in reasonably good health The mother died at 50, from a "lingering consumption" The patient had waited on her mother constantly for three months prior to her death, but developed no symptoms following this exposure She has two brothers living, aged 50 and 55 years respectively, and both in good health Four sisters died in early infancy, the causes of their deaths being unknown to the patient One brother died of a wound received in the Civil War when but 20 years old.

Personal History—When a child the patient had eczema on the scalp and along the shins, and at about the same time, had a severe attack of ringworm She also had measles, scarlet fever, chickenpox and mumps during childhood She never had any of the other diseases nor has she ever been seriously sick at any time since puberty There was no history of typhoid or malaria, and she has never had symptoms which would indicate a tuberculous infection Menstruation began at 14 and terminated in a normal climacteric at the age of 50 Before marriage she had dysmenorrhea but was much better after marriage, and has considered herself normal in that respect marriage, and has considered herself normal in that respect ever since She has borne six children, the latest eleven years ago

History of Present Condition—For eight years she noticed a redness of the face so striking at times that even the school children noticed it and would run past her house exclaiming: "Look out for the red Indian woman ' During this entire period she had a feeling of fulness of the head and dizziness at times This still continues, but occurs only at comparatively long intervals Three years ago she first noticed a tumor in the abdomen, which enlarged rapidly, and at the end of the first year was as large as a cocoanut This tumor grew slowly, but continuously, and she did not notice at any time a decrease in size. She never had any form of hemorrhage.

Symptoms—The patient complained of extreme fatigue, a feeling of weight and dragging in the abdomen, and pressure over the bladder She suffered somewhat from nausea, a slight distress after eating, and occasional attacks of diarrhea. She never had fever but perspired easily There had never been much loss of weight

Present Condition—Jan 11, 1906 Patient was in fair flesh, had no difficulty in walking, and showed no trace of fatigue after rather a hard trip The color of the face and hands was striking The exposed skin had a dusky red color, and on closer examination, enlarged veins were seen in fine network throughout the skin The conjunctiva presented the same appearance The teeth and gums were normal there was no tonsillar enlargement The cervical glands, as well as those in other regions, were normal The lungs were normal save for a slight emphysema The heart was normal in size and sounds, and there was no dulness of the mediastinum Examination of the abdomen showed no ascites no enlarged veins, and the liver not perceptibly enlarged The entire left half of the abdomen was filled with a heavy tumor, which came out from under the costal border at the seventh cartilage, extending down to one inch to the right of the umbilicus One inch below the umbilicus it turned and ran almost horizontally across to the antero superior spine of the ilium, and thence behind the crest of the ilium There were three typical notches of the median edge, which however, were very blunt Careful palpation gave an impression that this tumor was thicker in the anteroposterior diameter than is usual with splenic enlargements The length of the anteroposterior diameter from the costal border to the lowest point in the abdomen was seven and one half inches The tumor was seven inches from the extreme right edge to the point where it disappeared behind the crest of the ilium The skin was everywhere mottled but there were no enlarged veins except on the face and hands There was no edema, but some tenderness on percussion over the sternum, tibia and other long bones. Urinary examination gave normal findings

Blood Examination (Crummer) —

Red blood cells (Thoma Zeiss)	7 700 000
White blood cells	4 700
Hemoglobin (F M)	1-0 per cent
Index	approx 4/5

Smears stained by the Ehrlich's nitrophile and eosin methylene blue method showed considerable variation in the size and contour of the red blood cells There were many microcytes and a few pale staining macrocytes A few cells show slight poikilocytosis and in almost every field polychromatosi could be recognized Nucleated red cells were found in considerable numbers While counting 200 white cells 24 nucleated red blood cells were seen, which equals 6 600 nucleated red blood cells per c.cm. Five or six were typical normoblasts while the others showed many characteristics of the megaloblastic type of cell.

The differential white cell count showed

Polymorphonuclears	[illegible] per cent
Eosinophiles	4 0 per cent
Large lymphocytes	[illegible] per cent
Small lymphocytes	11 0 per cent
Myelocytes	4 0 per cent

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1 Englebach and Brown THE JOUR. A M. A., Oct. 20 1906. This article contains a complete biography

Treatment—Acting on the advice of Turk, the patient was placed on Fowler's solution, which, however, she did not stand very well, and a pill, containing arsenous oxid, 001 gm, pepper, 020 gm, and licorice, 050 gm, was substituted with the same bad results The tumor mass was regularly given fifteen minutes' exposure to the Roentgen ray, and an abdominal support was ordered

Subsequent History—On February 11, the patient again presented herself for examination, feeling much better, and stronger in every way, the symptoms had practically disappeared. She had had eleven Roentgen ray treatments The tumor was smaller in size, its transverse diameter being four and one-half inches, while its longitudinal diameter was five and one-half inches The anteroposterior diameter had diminished, and it had assumed more nearly the shape of the ordinary splenic tumor On examination the urine was found normal in every particular The blood pressure by the Riva Rocco (wide cuff) apparatus was 132 mm.

Blood examination on this date

Red blood cells	6 048 000
White blood cells	5 500
Hemoglobin	90 per cent.
Index	approx 3/4

The microscopic findings were the same as at previous examination

Jan 5 1907 It has been impossible to make further blood examination of the patient, but a report was just received stating that the patient continued well during the spring and summer, was able to work, and was entirely relieved of pain and distress in the abdomen. She had an attack of jaundice during August and the early part of September, which gradually cleared up, and since that time she has been less cyanotic In September the spleen began to enlarge again, but on taking Fowler's solution it gradually diminished in size and is now less than half as large as it was at the time of first observation Now it does not extend to the median line or as low as the umbilicus Subjectively, she feels better and stronger in every way

This case presents the usual features of polycythemia in its characteristic form, as in cases hitherto reported It is furthermore one of the few reported cases in which improvement has been definitely noted Concerning the theories of pathogenesis applied to this case, we have, it is true, a history of exposure to tuberculosis before the disease began, which might support the theory of Rendu and Widal,[2] as to the tuberculous origin of this trouble, but careful examination showed absolutely no other signs of a tuberculous process, and it would hardly be fair to assume that this case was also one of localized splenic tuberculosis, particularly as the blood examination showed more definitely than in any of the hitherto published cases, the signs of an irritative lesion of the bone marrow (megaloblasts and myelocytes) thus in a great measure substantiating Turk's[3] assumption that polycythemia is in reality a primary disease of the red bone marrow

2 Splenomegalie tuberculeuse sans leucemie avec hyperglobulie et cyanose Bull. et mem de la société med. des hôp 1899 111 p 528

3 Wiener klin Wochschr 1904 Nos. 6 and 7

Removal of Foreign Bodies from Female Rectum.—Kakuschkin states in the *Russische med Rundschau* for December that it is an easy matter to remove a foreign body from the female rectum if it is manipulated downward with two fingers of the hand introduced into the vagina The perineum is pressed up and back by the other hand at the same time In a personal case the nozzle of a syringe had dropped off in the rectum and the passage of stools failed to dislodge it, but it was readily manipulated downward with two fingers in the vagina. He remarks that the lower segment of the rectum belongs to the gynecologists, and that unless a foreign body is soon removed it is liable to be forced upward with the anti peristaltic movements

THE RADICAL MASTOID OPERATION *

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CHICAGO

(*Concluded from page 1092*)

Ballance, of London, makes a plastic operation that is used by many operators and undoubtedly yields good results He cuts through the inferior wall of the cartilaginous meatus (Fig 27) from its tympanic end to the inferior portion of the concha This incision is then curved (Fig 28) upward and backward until the level of the anterior beginning of the helix is reached where it stops

This cartilaginous flap is thinned of all possible superfluous tissue, and sometimes of some of its cartilage, and is then turned back and the curved portion fastened with through and through sutures (Fig 29) to the large anterior mastoid flap (Fig 30) The parts are thus placed in position (Fig 31) and the meatus expanded and forced against the bone as well as possible by firm gauze packing (Fig 32) Some operators do not trust to the various flap operations to epidermize the bone cavity, and claim surer and speedier results by grafting skin into the cavity, either at the time of primary operation or at a secondary operation performed in from ten to fourteen days after the original procedure, by first completely reopening the wound, then grafting and again closing the wound, as recommended by Ballance I do not use grafts at all unless in the subsequent healing of the case they become indicated, which I find to be rather seldom, nevertheless, there is no good reason for not using them and they undoubtedly expedite and assure perfect healing Such skin grafts may be very large as recommended by Ballance (Figs 36, 37, 38), who usually finds one graft to be sufficient, or smaller as proposed by Jansen and others, but of whatever dimensions they may be used they should, of course, always be cut as thin as possible by a sharp flat razor, the blade being lubricated by a warm normal salt solution The graft may be transferred from the razor to a warm wet spatula (Fig 34) by means of needles (Fig 33) with handles, and then placed in its position on the bone by the same instruments, being, of course, careful to wipe the parts as dry as possible before the graft is permanently placed It may be coaxed into its position by firmly twisted cotton on an applicator or by the "stoppers" (Fig 35) as devised by Ballance The grafts may be held in position by small balls of cotton dusted with aristol or xeroform powder, or Ballance recommends that the entire operative area be covered first with gold foil and then packed with small antiseptically-dusted cotton balls or with narrow, dry gauze (Fig 39) and allowed to remain for one week and then removed by the meatus, as, of course, the post-auricular wound is immediately closed after the placing of the grafts, packings, etc Some operators graft by placing either large or small pieces of tissue on the raw surfaces, through the meatus, and holding them there by small pledgets of gauze or cotton This procedure is performed at varying times after the major operation, some preferring to do it at the first dressing, others a little later, and some only grafting at all when obstinate, unhealed surfaces call for such a procedure

* Figures 42, 43, 44 and 45 are omitted. They will appear in the reprints of this article.

AFTER TREATMENT

Leaving the subject of skin grafting now and taking up the after treatment of cases on which radical mastoid operation has been performed, it may be said that the bandage should remain in position, unless contraindications occur, for three, four or five days, when it should be carefully removed with an abundance of irrigation to avoid pain and injury The area operated on should be thoroughly irrigated, cleaned, soaked with some antiseptic solution, dried, dusted with xeroform powder and firmly repacked with gauze and then bandaged I be-

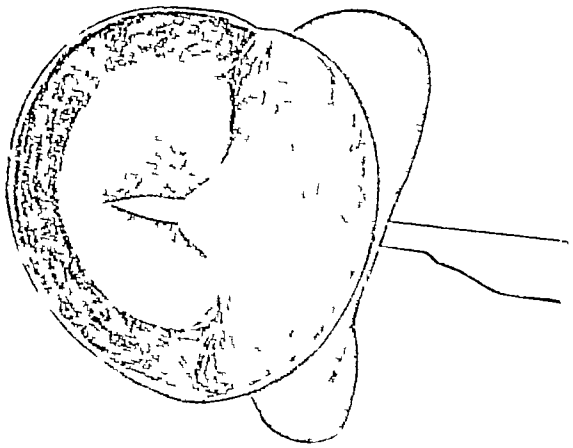

Fig 27 —The Ballance flap (After Ballance)

lieve many excellent operations are spoiled by poor after treatment, and by this I refer especially to poor packings, as exuberant granulations are the menace of good healing These cavities should be kept tightly packed until dermatization is well under way It should be remembered that in this large, surgically produced cavity are several sub-cavities of varying sizes and depths In the first place there is the large antrum and mastoid cavity, that should be kept firmly packed to its utmost recesses This cavity being back of the meatus, and, therefore, somewhat out of sight, is apt to be neglected by the dressing surgeon, in which case exuberant granulations will speedily form and unpleasant and embarrassing complications will surely occur Then there is what is left of the osseous meatus, with the inner tympanic wall at its extremity This must be kept firmly packed as granulations will spring up and occlude the meatal space, thus hindering and sometimes nullifying the results of a good operation There is also a somewhat curving, gutter-like concavity, representing the aditus ad antrum, connecting the tympanic and antral cavities, in which exuberant granulations are likely to form, with their embarrassing consequences where great pains should be taken in the packing (Fig 40)

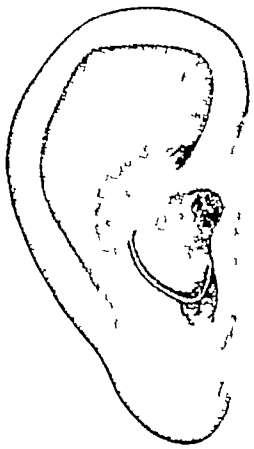

Fig 28 —The Ballance flap showing curve of incision (After Ballance)

The general custom among surgeons is to pack these wounds with a single long strip of gauze, but in doing this I have found it impossible to accurately and firmly pack all the different sub-spaces as adequate pressure of gauze in one place will move it from its position in another, and besides this, where so much gauze is being used in a continuous strip it is impossible to see just what is being done I therefore (after the first dressing) use several pieces of gauze, which are separately packed into the different cavities In the

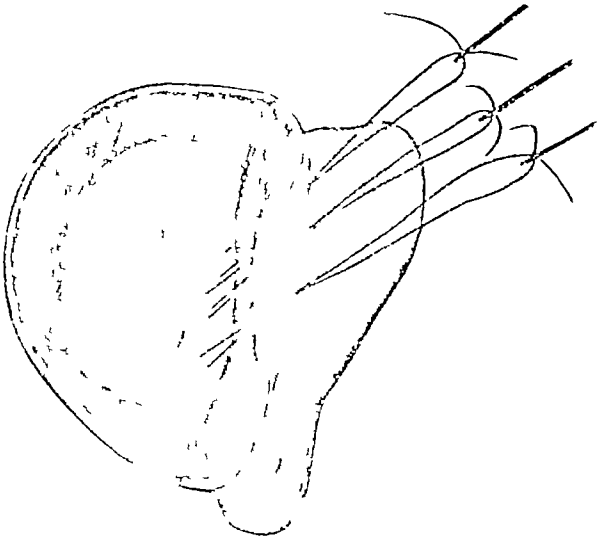

Fig 29 —The Ballance flap (After Ballance)

first place, a very small piece of gauze is packed into the gutter-like concavity connecting the tympanic and antral cavities To do this accurately a small narrow-edged packer (Fig 41) is necessary, and for this purpose I employ an especially devised instrument, which is narrow, has a roughened edge and readily carries the gauze on its point After this little pledget has been placed another small piece of gauze is packed against the inner tympanic wall A longer piece

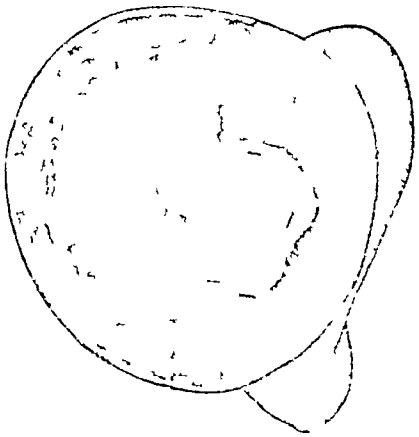

Fig 30 —The Ballance flap (After Ballance)

may now be packed backward upward and inward into the antrum and mastoid space and firmly tucked into position with the bent packer so that no loose end drops down into the meatal space to obscure our vision The remaining space may now be packed with gauze great caution being taken not to displace any of the previously placed pledgets In this way all important [illegible] are firmly and permanently p[illegible] the [illegible] exuberant granulations rend[illegible] I[illegible] in[illegible]

how beautifully cases progress toward a speedy cure under this method of packing, and I urge on mastoid operators its faithful trial

The dressing should be repeated in two days and then again in two days, when the sutures should be removed The original forceps as devised by Michel for the removal of metal sutures have flat surfaces on the inner aspects of the two jaws It is, therefore, very difficult to engage the middle of the bent suture between the two blades, which is quite necessary in order to spread the two extremities of the suture so that the sharp points may be released from the flesh I have, therefore, modified these forceps (Fig 24), making the upper jaw convex and the lower jaw concave, and roughening both inner aspects, which engages the suture and releases it much more readily The dressings should be repeated every two days until the mastoid wound is firmly united, when the bandage may be discarded and the dressings, treatment, etc, carried on each day through the meatus As soon as possible, or, in other words, as soon as the reasonably dry appearance of the parts will permit, the dressings should be made under dry conditions, and mopping the tissues with cotton or gauze should replace the process of irrigation, after which insufflations of xeroform or some other antiseptic dusting powder should be made before the gauze packing is carefully and firmly replaced Nevertheless, from time to time, mixed accretions will accumulate in the ear and necessitate thorough irrigation, followed by the use of some antiseptic solution, xeroform, etc, always, however, keeping the meatus firmly packed to the very end of the canal in order to maintain a capacious opening and prevent strictures It is rarely necessary to keep such patients in the hospital for more than two weeks, after which they may present themselves at the office for daily treatment In my experience these cases may be dismissed as cured in from ten to twelve weeks, some cases being cured in shorter time and some, of course, taking much longer They should, however, all visit the surgeon four or five times a year to have the enlarged and irregular meatus thoroughly cleansed of cerumen, desquamated epithelium, etc, which, if allowed to remain, would ultimately produce an unhealthy condition of the parts The remarks made by Dr Dench of New York[2] on this phase of the results of the radical operation are so true and so comforting to both surgeon and patient that I take the liberty of quoting Dr Dench's own words

Fig 31 —The Ballance flap (After Ballance)

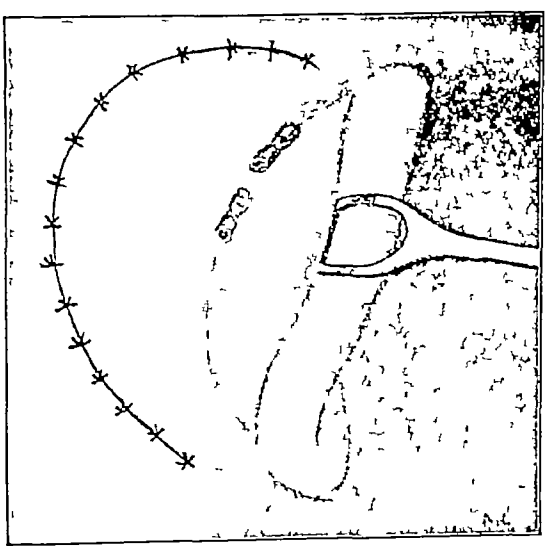

Fig 32 —The Ballance flap (After Ballance)

Fig 33 —Needle for transferring graft to spatula.

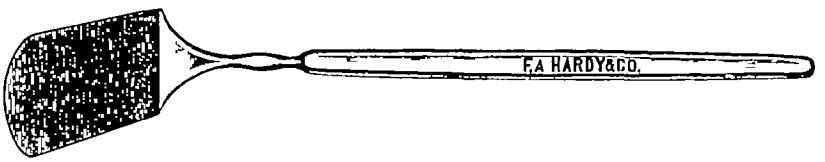

Fig 34 —A spatula for holding graft.

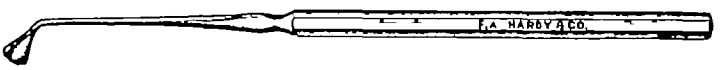

Fig 35 —A stopper for coaxing graft into position.

Even in those cases where the cure has been considered perfect, it is not uncommon to have the patients return, at intervals of from three to four months to one or two years, complaining of some discharge from the external auditory canal An examination will show the entire cavity filled with a mass of desquamated epithelium, on the removal of which a small amount of pus may be found If this accumulation has remained in the canal for a considerable period of time, desquamation of the epithelial lining of the cavity may have taken place, either completely or over certain areas On removing the epithelial mass the cavity certainly looks far from healthy, and one unaccustomed to this condition would say that the radical operation had been a failure. If the cavity is simply sterilized with an alcoholic solution of bichlorid of mercury, and then dusted with some bland non irritating powder, such as boric acid, xeroform, zinc oxid, or, in fact, any sterile powder, the cavity immediately becomes dry In other words, the apparent relapse in so many cases is due simply to the fact that the integument lining the middle ear cavity and the mastoid cells, is improperly nourished This integument forms the lining of a blind pouch where it is subjected to increased temperature, increased moisture, the absence of light, and no circulation of air, these latter conditions being essential to the proper nutrition of the normal skin Moreover, it must be remembered that this tegumentary lining is applied closely to the bony walls of the cavity, with very little connective tissue substance intervening It is not strange, therefore, that desquamation should take place from time to time, in such a cavity, and that the desquamated epithelium, if allowed to remain in position, should gradually accumulate until the cavity becomes completely filled with these epithelial cells The pressure of these cast off cells causes superficial ulceration of the underlying

2 The Laryngoscope October 1906

tissue, so that complete desquamation of a cavity of this kind frequently takes place. These attacks of desquamation of the cavity occur less and less frequently as time goes on, because the integument gradually adapts itself to its new habitat, and in the course of time is able to conform itself to its anomalous position These attacks of desquamation should not be looked on as a recurrence of the otitis As before stated, they are easily relieved by the removal of the epithelial detritis, and the sterilization of the walls of the cavity

It should not be forgotten that in case of genuine cholesteatomatous masses having been discovered and removed it usually will be best to maintain, at least for a year or so, a permanent post-auricular opening by

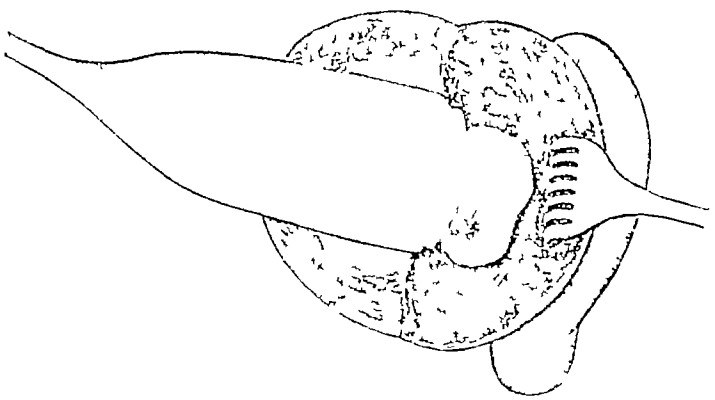

Fig 36—The spatula placing the graft in position (After Ballance)

packing instead of suturing the mastoid wound When thought desirable such openings may ultimately be closed by a simple plastic operation

The surgeon is usually asked what will be the effect on hearing if a patient submits to the performance of the radical mastoid operation? In my experience, while a very few cases have suffered a diminution of the func-

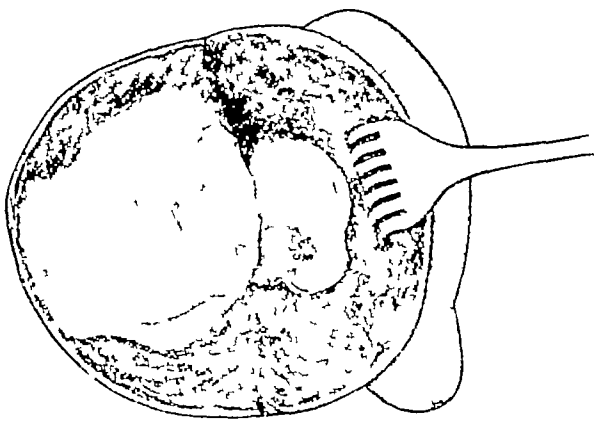

Fig 37—The spatula has just been withdrawn (After Ballance)

tion of hearing, yet a great majority of my cases have either had their hearing improved or at least not impaired It must be remembered that before the operation is performed serious pathologic changes in the tympanum have occurred, such as retracted ossicles, cicatrical bands, etc, all of which must surely impede the passage of sound waves to the labyrinth, and it is quite possible, and, indeed, in the light of experience, exceedingly probable, that a complete clearing away of these obstructive pathologic elements will be likely not only to not interfere with hearing, but to actually improve it

For some time past I have derived much satisfaction from the use of rotary burs (Fig 45) driven by the Victor electric engine (Fig 43) This engine is simple, strong, easily controlled and always ready, and I find myself using the engine more and other instruments less While I never expect to depend on the engine alone, I believe it to be a most useful addition to our armamentarium

I am aware of the fact that the radical mastoid operation is not popular with some surgeons who regard such

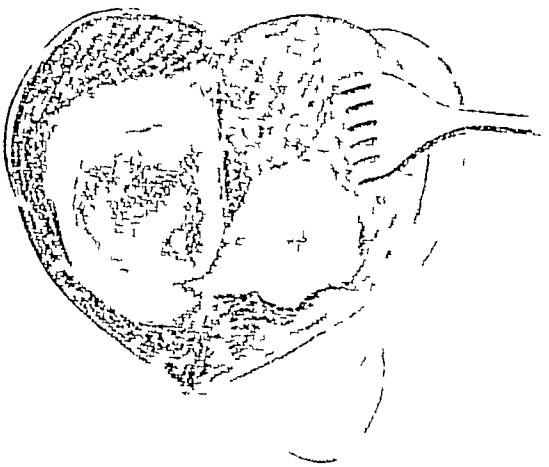

Fig 38—Commencing to coax the graft into the cavity (After Ballance.)

procedures as almost unwarrantable unless distinct and menacing operative indications are present In other words, they do not advocate this operation for the relief of intractable purulent otorrhea, or at least apparently are never willing to admit the intractability of an aural discharge For the benefit of such conservative surgeons I wish to close this article by a quotation from no less a man than Ballance[3] of London, who makes use of the

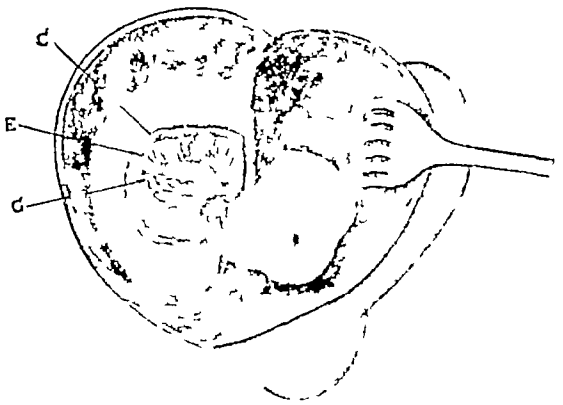

Fig 39—The graft in position covered with gold leaf C bone F Graft G Gold leaf (After Ballance)

following language, which, I am confident, will be substantially endorsed by most of the world's best otologists

I have no longer any doubt that all cases of chronic purulent discharge from the ear should be treated by the complete operation, though I am aware that in some cases the disease has been rendered latent by the removal of ossicles alone or even by prolonged systematic dressing through the meatus No one potters with a chronic empyema because some few acute cases recover with a single aspiration It must be either war or peace The lethal complications that we meet with are not

3 Lancet, Sept. 30 1905

seldom the outcome of the stammering mind of Mr Ready to-halt. The armed neutrality which promises operation if the need arises was, and is, the orthodox plan and has much to say for itself, but as Carlyle remarks, "The two internecine plans collapsing into one, that is the clearly fatal method" The great majority, if not all, of the chronic cases have commenced as an acute disease and it is an imporant practical question, how long may they be regarded as remaining so? That is, after what interval should the complete operation and not the so called operation for acute disease be performed? Many cases in which the operation for acute disease has been performed subsequently require the complete operation and I am now of opinion that in any case requiring operation after six weeks discharge the surer treatment is the complete operation The operation for acute disease is an incomplete procedure and therefore uncertain in its results, the bridge is not divided, the abscess is incised only at its two extremities, the narrow neck of the antrum provides only imperfect drainage, and is liable to become blocked by granulations In cases of ingravescent appendicitis no surgeon would dare to call himself a late operator, but no one who has attended meetings at which the treatment of temporal bone disease has been debated can fail to be struck with the fact that the orators seem to plume themselves on avoiding operation Is this a logical position to take up in treating a disease which is also ingravescent and which has perhaps a history of twenty years' standing, which may be tuberculous, and which in any case is liable to infect other parts of the body? The best results both to the hearing and to the health of the patient in suppurative temporal bone disease are obtained by early and complete operation No surgeon would leave a sinus leading to diseased bone in the tibia for twenty years, or even for one, however cleverly he might be able to irrigate it or tickle it with antiseptic powders and cotton wool In mastoid disease, as in Bunyan's allegory, the Messrs "Hopeful," who are persuaded to stray along the easiest going of By path Meadow, will not escape the crab-tree cudgel in the dungeons of Giant Despair"

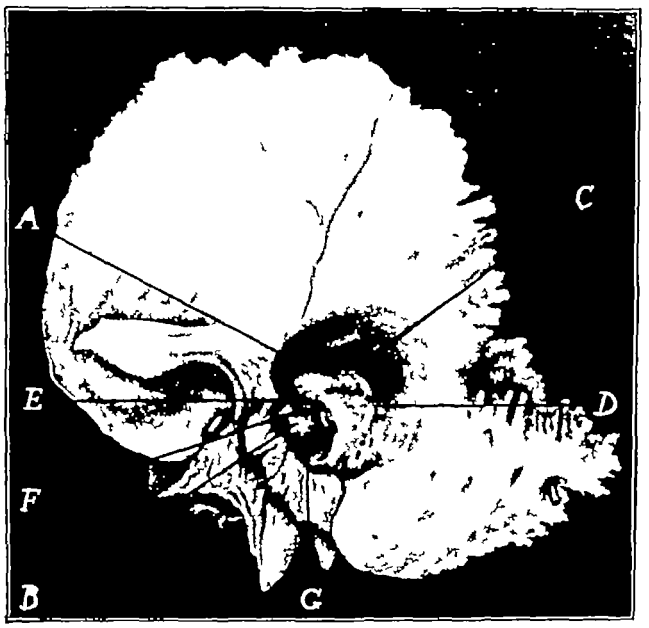

Fig 40 —Showing the completed mastoid operation and the cavities for packing A, gutter like concavity connecting the attic and antrum representing the partially obliterated aditus ad antrum B promontory C, antrum space D, mastoid space, E location of the facial nerve F fenestra ovalis G fenestra rotundum

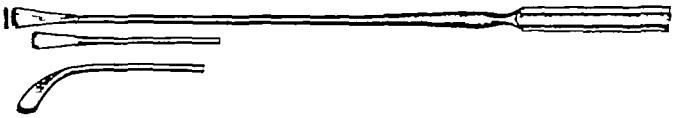

Fig 41 —Showing the narrow edged packer different sizes and shapes.

72 Madison Street.

PULSUS PARADOXUS IN PERICARDITIS WITH EFFUSION

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Pulsus paradoxus is one in which, during inspiration, the pulse becomes feeble or imperceptible Since the time of Griesenger and Kussmaul pulsus paradoxus has been observed in a variety of pathologic conditions F Rigel[1] classifies these conditions as follows

1 Mechanical interference with the large veins and aorta, as in Kussmaul s case Here the heart is unaffected

2 Obstructions in the air passage, causing an increased negative intra-thoracic pressure, which inhibits the heart's action

3 Lowered activity of the heart

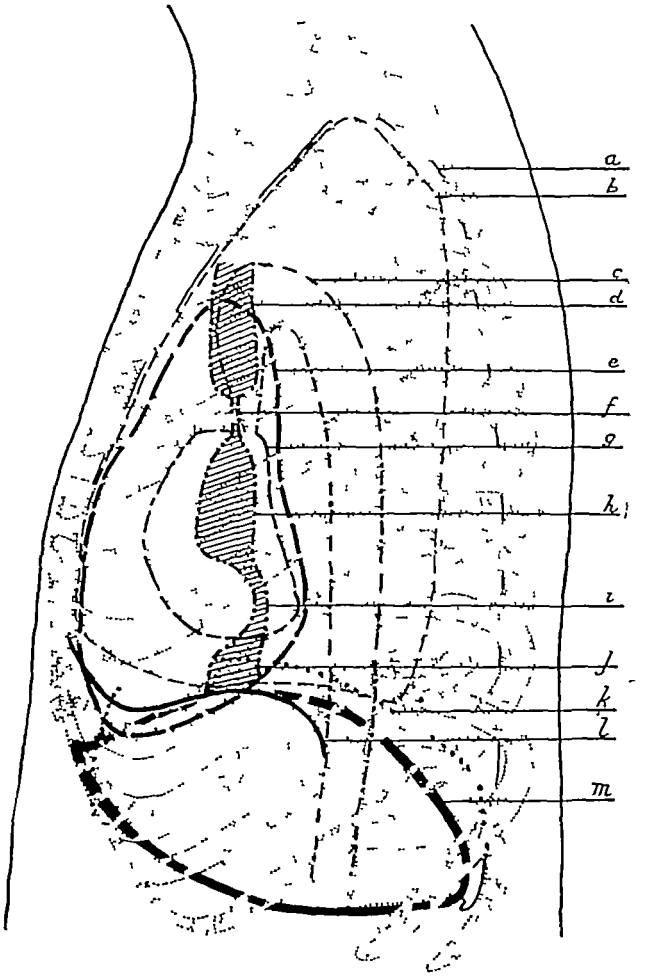

Fig 1 —View of organs from left side a, Parietal pleura b left lung c aorta d superior vena cava e pericardium f collapsed superior cava g heart the heart is curved as shown in Figure 2 so that this projection is much thicker than the heart really is h, right auricle i collapsed inferior cava j, inferior vena cava k right cupola of diaphragm l central tendon of diaphragm m left cupola of diaphragm.

Pulsus paradoxus is a distinct variation from the normal, consequently it is pathologic and must have a cause As pulsus paradoxus has been observed in a variety of conditions, its causes must vary, but in each condition this cause should be constant From a clinical point of view pulsus paradoxus should be a sign of the existence of its cause, and the importance of this sign must depend

1 Deutsch med Wochschr xix 1903 345

on the nature of the pathologic condition From a diagnostic point of view pulsus paradoxus is not of especial differential importance, but as it does not exist throughout the entire course of a given clinical picture, pulsus paradoxus heralds the development of a stage in the clinical course of a disease

Recently I have had an opportunity to study the cadavers of two individuals who had pericardial effusion at the time of death, and in this paper I shall attempt to show the physical explanation of pulsus paradoxus and its significance in cases of pericarditis with effusion The material for this paper was obtained from Dr C M Jackson, to whom I wish to express my thanks

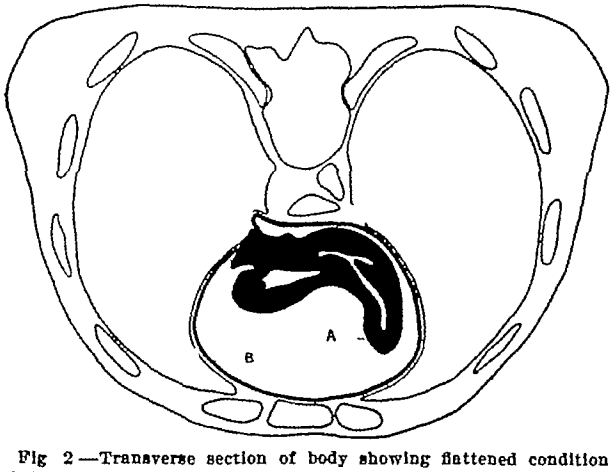

Fig 2—Transverse section of body showing flattened condition of the heart (A) and its relation to the pericardial wall (B)

The cadavers were injected with formalin and allowed to harden, after which they were transversely sectioned Drawings and measurements of the sections were made while the material was fresh From these data the several organs were projected as shown in the figures By this method the position of the organs at the time of death was preserved and have been faithfully projected

Case 1—The cadaver is that of a fairly well built male negro, aged 30 On examination, left sided pleurisy with a very small effusion, adherent right pleurisy and pericarditis

Fig 3—Section showing the superior portion of the pericardial sac and the collapsed superior vena cava through which has been passed a piece of paper

with effusion were observed. In Figure 1 the general relationship of the organs is very well shown Only those points of immediate interest will be described.

The heart (Figs 1 and 2) and the superior cava (Fig 1, d) are both collapsed, and the lumen of the superior cava is X shaped (Fig 1, f) from the point where it enters the pericardium to the right auricle In Figure 3 is seen a piece of paper that has been passed through the vein from above The superior cava above this constriction was distended with blood.

The inferior cava is collapsed (Fig 1 i) In Figure 4 a piece of paper has been passed through the vein from below Below the collapsed portion the vein was distended with blood

Case 2—Cadaver is that of a male negro, aged 29, well formed and fairly well nourished Examination revealed tuberculous consolidation, with a small cavity formation in the left lung, and pericarditis with effusion In amount the effusion was about the same as in Case 1 The relative displacement of organs is also similar to Case 1 The heart however, and venæ cavæ are greatly distended (Fig 5)

In the first case the venæ cavæ within the pericardial sac are collapsed, in the second case distended The conditions here are flexible walled tubes (venæ cavæ) passing into and partially through a distended sac, the walls of which are flexible and elastic (pericardium), consequently the degree of distension of the veins must depend on the relationship between the intravenous and intrapericardial pressures If the venous pressure is greater the veins must be distended, if less, collapsed But if the pericardial pressure is sufficient to collapse the veins no blood can enter the heart and death must

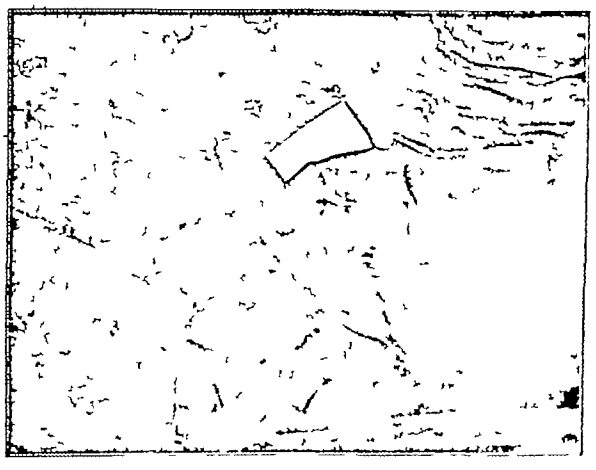

Fig 4—Section just above the entrance of the inferior cava into the pericardial sac A piece of paper has been passed through the collapsed lumen In front of the paper the depression of the pericardial wall into the distended vein is well shown

follow During life, then, the pericardial pressure must remain below that in the veins If the venous pressure is sufficient to distend the veins a relatively normal amount of blood will flow to the heart

The pericardial sac is larger than the heart contained therein, consequently a small quantity of fluid may collect in the sac without materially changing the pericardial pressure But if the fluid continues to collect, the pericardium must be more or less distended and the pericardial pressure positively increased Owing to the negative, or slightly positive, pressure within the veins a relatively great effect is produced on them by a small increase in the pericardial pressure This increase in pericardial pressure must in a proportionate degree constrict the vena cava (stenosis of vena cava) This constriction must obstruct the flow of blood through the veins producing a congestion and rise in venous pressure This rise in venous pressure causes the blood to either dilate the vena cava to the normal or to flow faster through the constricted portion With each increase in the

dial pressure the veins must be further compressed or obstructed, producing additional congestion and rise of venous pressure This process must continue until the limit of venous congestion and pressure is reached

As the venous pressure changes during inspiration and expiration, there is at all times a maximum and minimum venous pressure The pericardial pressure must be lower than the minimum pressure or the veins must be closed during the period of lowest pressure This procedure would cause additional congestion and a rise of venous pressure above that in the pericardium

The thick, strong pericardial wall, when distended by a pressure almost as great as that within the veins, can not be influenced as easily as the thin walls of the veins by the respiratory change in intra-thoracic pressure Consequently the pericardial pressure remains during inspiration and expiration more constant than the venous pressure approach the venous pressure As it rises it must pass the minimum venous pressure to remain for a time at various points between the maximum and minimum venous pressure

Whenever the pericardial pressure is greater than that in the veins the latter must be constricted or collapsed The degree of constriction must be determined by the difference in pressure The flow of blood to the right heart must decrease proportionately to the constriction of the veins, as further rise in venous pressure is impossible The lower venous pressure is during inspiration Consequently, the greatest constriction of the veins occurs, and the minimum quantity of blood flows to the heart, during inspiration During expiration the venous pressure rises above that in the pericardium, the veins are dilated and the maximum quantity of blood flows to the heart This maximum (expiratory) and minimum (inspiratory) flow of blood to the heart must

Fig 5 —Section through lower portion of pericardial sac The congulated fluid surrounds the lower portion of the heart. To the subject s right is seen the lower portion of the distended right auricle and inferior vena cava.

The venous congestion and rise in pressure become a compensatory congestion and a rise in pressure to compensate the pericardial pressure in exactly the same sense as the left auricle dilates and creates additional pressure to compensate a stenosis in the mitral opening, and as such must be subject, in a measure to the same laws of reserve forces and broken compensation to which the heart chambers are subjected

When the limit of venous congestion and pressure has been reached each rise in pericardial pressure is not followed by a rise in venous pressure, the veins begin to fail to compensate the pericardial pressure, and there develops a broken compensation in a compensatory venous congestion The pericardial pressure may now continue while the pericardial pressure remains between the maximum and minimum venous pressures, or during the stage of broken compensation in the venous congestion

The amount of blood entering the right heart must determine the condition of the pulmonary circulation, and this in turn determines the condition of the general circulation The diminished amount of blood during inspiration gives lowered arterial tension—rapid and small pulse The increased expiratory amount of blood gives a rise in arterial tension—decrease in pulse rate and increase in volume This is the pulsus paradoxus As the pericardial pressure approaches the maximum venous pressure the degree of pulsus paradoxus increases

Pulsus paradoxus in pericarditis with effusion is caused by broken compensation in a compensatory venous congestion If this is so pulsus paradoxus is a sign of broken compensation in the venous congestion, and denotes the time when the pericardial pressure must be reduced or death may at any time follow—due to constriction of the venæ cavæ beyond the point when sufficient blood to maintain life can enter the right heart

Pulsus paradoxus should appear relatively early in cases with thick, strong pericardial walls, and relatively late in thin, elastic pericardial walls

SUMMARY

1 Pericardial effusion produces stenosis of the venæ cavæ

2 This stenosis is relatively compensated by a rise in venous pressure

3 This compensation fails when the pericardial pressure is greater than the venous pressure

4 Owing to respiratory change in venous pressure the degree of broken compensation varies in inspiration and expiration—greatest in inspiration, least in expiration

5 The variation in compensation carries varying quantities of blood to right heart (and to general circulation)—least in inspiration, greatest in expiration.

6 The respiratory variation in quantity of blood passing to general circulation is sufficient to explain pulsu paradoxus

Note—Since writing the above article Franke[2] calls attention to venous and hepatic compensation in cases of tricusp insufficiency, and likens their action to that of the rig ventricle in mitral lesions—W J C.

DRAINAGE OF THE HEPATIC DUCT,

CONSIDERED ESPECIALLY IN SERIOUS INFECTIOUS PROCESSES OF THE LIVER

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In a recent paper[1] relative to the advantages of surgical treatment of biliary infection resulting in hepatic cirrhosis, I pointed out that the large number of cirrhoses represented the last stage of an irritative process in the liver and were in reality chronic hepatites originating from infection Biliary cirrhosis is at the present time considered as infectious radicular angiocholitis, either subacute or chronic, and consequently it is quite logical to treat the pathologic condition like any infectious angiocholitis, in other words, by drainage of the gall bladder in order to give exit to the septic bile. In order to obtain a successful outcome, however, the drainage should be instituted at a time when the hepatic cell has not been destroyed by a sclerous process resulting from the infection On the other hand, a new conception has come to light which accords to infection a part in the pathogenesis of vascular cirrhosis, consequently it is logical to foresee that drainage of the gall bladder will be the method of choice, because it seems to very favorably act on the intrahepatic venous circulation As the title of this paper indicates, the question of drainage of the hepatic duct will be considered particularly from the standpoint of serious infectious processes of the liver either arising from calculi or other sources The form of drainage is indicated when there is possibility of biliary retention, because it has been amply proven that when there is an obstruction of the principal biliary tracts retention of bile follows with an increase in size of the liver and dilatation of the hepatic duct, which renders drainage from this canal fairly easy to realize Drainage of the hepatic duct does not appear any more complicated than other surgical interferences on the biliary tract and, although in some instances it may be difficult, the excellent results that it has given should encourage surgeons to continue in this direction and to employ it systematically in every case where it is indicated

As to the technic of drainage of the hepatic duct, there are three principal methods along with a few others which may be considered as possessing special applications In the first place, we have drainage of the cystic duct and gall bladder The latter having been opened a drainage tube is introduced through the dilated cystic duct down to the hepatic duct, in other words this being complementary to cholecystostomy in general Secondly we have drainage by the cholecystostomy after incision of the duct, the drainage [illegible] being pushed down to the [illegible] duct. Both of these procedures [illegible] fied [illegible] hepatic [illegible] as distinguished from the [illegible] which [illegible] because [illegible] duced [illegible] two [illegible] ing [illegible] lower [illegible] tech [illegible] the [illegible] into [illegible] of [illegible] curre [illegible] so far [illegible] only [illegible] here [illegible] [illegible]

[illegible]

2 Wien klin Wochschr., 1906 xix 956 Extract in [illegible] Med. Sci. 1907 cxxxiii 153

1 Clinical Journal London Sept 19 1906.

the rectus, in other words, about on the level with the umbilicus. In this way the fibers of the rectus muscle are cut obliquely through at their internal half by the intermediary line of incision, but the external half of the muscle remains intact. This incision gives an easy access to the entire biliary tract, while at the same time section of the rectus, being only partial, facilitates the repair of the abdominal wall. Oblique incision parallel to the border of the ribs, vertical, median or lateral incisions with perpendicular section of the rectus have also been proposed, but in reality it would appear that these incisions, although fairly good, do not give the same facility as the one devised by Kehr. To my mind, however, the most important point is the use of the pillow as recommended by Mayo-Robson, the nature of the incision being of lesser importance.

When the abdomen is opened, the hepatic canal is sought for, a broad retractor being placed under the lower border of the liver, which should be pushed up under the ribs as much as possible, while a second retractor pushes the left border of the abdominal incision downward and to the left, including the transverse colon and duodenum. Gauze sponges should be placed under and around the retractors to protect the peritoneal cavity from biliary infection. The gall bladder is first examined and if found distended is easily exposed, but if the organ is retracted it may be quite hidden by adhesions. Following the lower aspect of the gall bladder, when it has been exposed, the cystic duct is felt, and by following this canal the fingers will reach the hiatus of Winslow, which is often very difficult or perhaps even impossible to recognize on account of adhesions uniting the gastrohepatic omentum to the posterior layer of the minor omental cavity. If one can penetrate the hiatus, nothing is easier than to seize the gastrohepatic omentum between the fingers and its upper part and to explore the hepatic duct in order to directly operate on it. Usually, however, in the cases under consideration, with a long history of angiocholecystitis, it is impossible to recognize the hepatic duct in the midst of the adhesions. Under these circumstances one should, so to speak, endeavor to work down on it through the adhesions, although this must be undertaken with great care on account of the close proximity of the portal vein and hepatic artery. If it is then found that it can not be exposed recourse may be had to the endocholecystic route, that is to say, after having opened the gall bladder down to the cystic duct, a catheter is gently inserted downward so that it reaches the desired region of the biliary tract. When the hepatic duct has been exposed it should be incised in order to remove any calculi that may be present in cases of lithiasis, after which a drainage tube is introduced. It should be remembered that one is working deep down nearly at the level of the hilum and if the retractors are properly placed, with the liver well raised, one should endeavor to exteriorize the hepatic duct with the fingers. When a good hold can be made on it, its wall should be freely exposed by prudently breaking down all surrounding structures with a director, and, if a calculus is present, the incision should be carried directly over it. When it has been made certain that there is only one calculus and if infection is absent or slight, the incision may be closed on the condition that drainage of the gall bladder is carried out, on the other hand if the markedly infected aspect of the patient indicates a decided septic condition of the bile, or if there is any fear that other calculi may be present at the point of origin of the branches of the hepatic duct, direct drainage of the latter should be instituted. As this paper particularly refers to these cases, I will briefly describe the manner in which this drainage should be carried out.

A rubber drain proportionate to the caliber of the duct and which may be easily inserted in its lumen is placed in the upper part of the hepatic duct, being inserted to the extent of one or two centimeters and for security, united with fine catgut to the borders of the incision in the duct, its other end being brought out through the abdominal incision. By this procedure it is almost certain to drain away all the bile, the tube being surrounded by some strips of iodoform gauze to protect the peritoneum against any possible escape of bile, the gauze being removed at the end of 48 hours. A long tube without any perforations should be brought out through the abdominal dressings and placed in a receptacle containing some antiseptic fluid, thus creating a real siphon action, bringing all the bile outside, and by this means a perfectly absolute drainage results. If one chooses however, the end of the drain may simply be surrounded in the abdominal dressings, which, when saturated, should be changed. No absolute rule as to the time that the drain should be allowed to remain can be formulated, because everything depends on the patient's general condition, the rapidity with which the secondary elimination of calculi takes place, as well as the degree of infection of the bile. It may be said, however, that when the adhesions have become solid, that is to say, at the end of a week, the tube may be removed and the bile allowed to escape through the fistulous tract thus formed. Should the bile be very thick, thus tending to obstruct the lumen of the tube, irrigation through the latter should be resorted to, which dilutes the secreted liquids and may also wash out small calculi which have remained at the upper part of the hepatic duct. Later on, the tube may be removed each time that it needs to be cleansed and when it has been definitely removed the fistula should be irrigated once daily. The final removal of the tube should be done only when the bile has become perfectly transparent and fluid and the patient's general condition has sufficiently improved with complete absence of any rise in temperature.

Considering now the technic of indirect drainage of the hepatic duct, I would say that I will not insist on that made by way of the ductus choledochus, because it merely represents an easy complementary procedure of choledochotomy, an operation which at the present time has become classical and currently undertaken. Drainage of the choledochus and consequently of the hepatic duct may be accomplished by a drain placed in an incision made in the former, but this is not, properly speaking, drainage of the hepatic duct. After having done away with the obstruction to the flow of bile, which is usually a calculus, and being assured that there are no others located higher up, a tube, introduced through the incision in the choledochus, is pushed as far as possible into the hepatic duct, and this is facilitated from the fact that the caliber of the latter duct is greater below than above and, on the other hand, from the fact that it is always dilated when any obstruction of the choledochus exists. The drain which should be pushed, if possible up to the hilum, is held in place and surrounded with strips of gauze protecting the peritoneum from the exit of bile around the tube. Concerning drainage of the cystic duct and gall bladder two cases can be considered. I will not refer here to cholecystostomy, pure and simple which is a very excellent method of drain-

age, but I would say that it can not give rise to a real drainage of the hepatic duct. This drainage is done after having either opened the gall bladder and sutured it to the abdominal wall or after having performed cholecystectomy In both cases the gall bladder is carefully explored, after which the bile ducts are likewise treated and the proper technic carried out according to circumstances If the gall bladder and cystic duct are dilated on account of the presence of calculi in the latter, the gall bladder is sutured to the abdominal wall and the drainage tube introduced down to the neighborhood of the hilum by way of the dilated cystic duct and, when properly in place, all bile coming from the liver is carried out just as if the tube had been introduced into the hepatic duct itself

Although this means of drainage is excellent in many respects, it does not prevent the possible flow of bile toward the choledochus and a continuation of the infection when the bile is particularly septic In point of fact, it is the spur present at the point of intersection of the cystic and hepatic ducts which is the obstruction to the formation of a perfect drainage of the hepatic duct and it is this obstacle that must be done away with If the cystic duct is patent, a narrow-bladed knife may be introduced into its lumen, passed along the groove of a director and the spur cut through, after which a tube may be pushed down into the hepatic duct If the gall bladder and cystic duct are shriveled up and permeable with difficulty, cholecystectomy may be done, and, by using the remains of the cystic duct as a guide, one may slowly incise the structures until the hepatic duct is reached, which is, in its turn, opened, the calculi contained within it removed, and the drainage tube introduced The latter should be always surrounded by strips of gauze to prevent peritoneal infection from the bile In all these cases of drainage by the choledochus or the accessory biliary tracts, after cholecystectomy, or by the way of a dilated cystic duct, the after care is the same as that employed in direct drainage of the hepatic duct, so that it is unnecessary to refer to them

The various means of drainage that I have so far mentioned may be considered as classical, but I should like to refer in a few words to the more or less exceptional procedure that the surgeon may occasionally be obliged to adopt It may happen that following an obstruction of the choledochus the hepatic duct becomes greatly distended forming a true cystic tumor projecting through the hepatic parenchyma similar to a hydatid cyst, or in the midst of adhesions which partially conceal it, may simulate a distended gall bladder under the lower border of the liver Such diagnostic errors occur and are excusable and they are very interesting to study, because, when known, error in treatment may be avoided and the surgeon will at once directly attack the hepatic duct or at least incise the choledochus in order to remove the obstruction and indirectly drain the hepatic duct by this route Hepaticostomy may be accomplished by two ways, viz the transhepatic and the infrahepatic route. In both cases, as the name indicates the duct is opened and stitched to the cutaneous incision The first instance of transhepatic hepaticostomy was done in 1888 by Thornton The case was an enormous dilatation of the hepatic duct by bile and numerous calculi, so that it formed a pocket causing the anterior aspect of the liver to project forward and communicated with the choledochus Similar other cases have been met with by Mayo-Robson and others The difficulty of an exact diagnosis of such lesions is evident both from the standpoint of its nature as well as site, because very frequently only a slight projection on the surface of the liver is noticed, or even a mere change in color is the only indication In the first place, the exact point of hepatic parenchyma to be incised should be thoroughly mapped out in order to have all necessary facility for treating the contents of the cyst formed by the distended hepatic duct. The most important point is the condition of the choledochus and the surgeon should give particular attention to this because the technic followed will entirely depend on the patency of this duct, and consequently before making an incision into the liver the biliary tract should be carefully explored

If one is certain that the duct is patent, after having removed the cause of obstruction, and that the flow of bile is normally accomplished, hepaticostomy may then be undertaken, the liver having been in the first place sutured to the parietal peritoneum On the other hand if the duct is not patent, the opening made in the hepatic duct should be sutured to the abdominal incision With whichever case one is dealing, when the pocket has been incised and fixed to the incision, a careful exploration should be made particularly on the terminal end of the hepatic duct and the origin of the choledochus, at which point the obstruction must necessarily be found, and the exploration should be continued until there is absolute certainty that the obstruction has been removed If, by chance, the dilatation arises in one of the primary branches of the hepatic duct, there is really no change in technic A large drainage tube should be inserted in the pocket and the after-care consisting of irrigation of the pocket, should be carried out as in any similar operation

Infrahepaticostomy dates back to 1899 but the first operation was not successful The hepatic duct was greatly dilated, forming an enormous intrahepatic cyst At autopsy it was found that the distension involved the choledochus and hepatic duct, but the cause remained undiscovered These two exceptional technics have certainly very distinct indications in some cases, but as yet instances where these have been done are far too few for one to make any conclusion relative to their value

Drainage of the hepatic duct has for its end to temporarily give exit to bile directly from the principal biliary passages, especially when there is an infection of the organism resulting from some infectious process of the liver Such drainage is absolute because it is established in the hepatic duct at its exit from the liver and, if it is well carried out, the bile can neither reach the duodenum nor the gall bladder Now, since all the bile is drained away, the drainage should only be temporary, because the organism can not be continually deprived of the bile, or, more properly speaking, the small intestine is not able to get along without such a necessary organic fluid for the digestion Although temporary it is a precious surgical resource to thus be able to remove from the body the poisons secreted by the hepatic cell and which otherwise would be carried to the intestine by the choledochus and thus continue to poison the organism Like all new methods this one has been the object of numerous objections such as suppression of the biliary function diminution of the caliber of the hepatic duct and irritation of the walls of the duct as well as the possibility of hemorrhage It is evident the total elimination of the bile exter[illegible] portant consideration but when the [illegible] oughly infected from a septic bile [illegible] temporarily deviate its course than

general infection of the subject As to the decrease in the caliber of the hepatic duct there is nothing easier than to remove the drain in order to irrigate Consequently such an objection is really of little value There is, however one of far greater import, viz, whether the lumen of the hepatic duct is always sufficiently large to allow of the introduction of the drainage tube It has, however, been amply shown by Delagenière that each time an obstruction is seated in the choledochus resulting in biliary retention with an increase in the size of the liver the hepatic duct is always found dilated and consequently presents the best possible condition for drainage When the choledochus is obstructed by calculi it is practically certain that the gall bladder will be found atrophied and the hepatic duct dilated It is not, however, only lithiasis that produces this dilatation, because every time that some cause, such as a mechanical obstruction or infection results in biliary retention with increase in size of the liver, the hepatic duct will be found dilated, and this very dilatation is, so to speak, an indication to establish total drainage If the gall bladder and cystic duct are used to obtain drainage by simply performing cholecystostomy, it is never certain that the cystic duct is patent, as even in the normal state it is not regular in caliber and when pathologically affected is more apt to be reduced in size, deformed and more or less obliterated On the other hand, choledochotomy with the introduction of a drain in contact with the incision of the duct and packing with gauze is of necessity insufficient and does not prevent quite an amount of septic bile reaching the terminal portion of the choledochus and entering the duodenum, thus keeping up the sepsis This, however, does not necessarily mean that total drainage should be systematically employed, because in medicine, as in surgery, there should be no fixed rules and everything should be subordinated to circumstances, for each case requires a particular treatment

Before considering the general indications for total drainage of the hepatic duct it should be mentioned that, according to the observation of most operators, obstruction from calculi in the primary branches of the hepatic duct and which have been impossible to extract are thus given an easy exit, but it is more especially a marked infection of the liver, whether it originates from calculi or some other cause, that total drainage is indicated, because by this means alone all the bile is removed

Without referring to the exceptional technics it may be said that one may drain by way of the accessory biliary tracts, by the choledochus or the hepatic duct itself, and we would now consider the indications and contraindications of each of these procedures We will first consider indirect drainage of the hepatic duct by way of the gall bladder and cystic duct Cholecystostomy can not be properly considered as true drainage of the hepatic duct, because, unless there is an absolute occlusion of the choledochus, nothing prevents the bile from reaching the intestine The introduction of a drainage tube through a dilated cystic duct and carried deeply down is certainly a step forward, but this method, although assuring an almost absolute derivation of the bile outward, is subject to the same objection already mentioned It is consequently to drainage by a tube reaching down to the hepatic duct that we should consider, and its indications are practically as follows A serious non-calculous infection is a certain indication, but it is cholecystitis that especially requires this treatment, because the presence of calculi in the gall bladder and cystic duct requires direct surgical treatment of these organs, and this is what has always been done until recently when one has introduced a tube down to the hepatic duct by way of the accessory biliary tracts after having performed the ordinary operations, such as cholecystostomy, cholecystectomy, and so forth Serious infection of the liver and biliary artery have rendered necessary this supplement to the surgery of the gall bladder, in spite of its difficulties, because all the bile coming from the liver should be drained away by an introduction of the tube into the hepatic duct itself, and, since the gall bladder has been opened, one should profit by the cystic duct to insert a drain down to the hepatic, and, according to circumstances, the dilated cystic duct can be used for the introduction of the tube after incision of the spur already alluded to, or the remains of the cystic duct may be used as a guide to reach the hepatic duct, incise it and introduce drain Here the indications are made evident by the pathologic lesions more than by the clinical history of the case Total drainage may be either temporary or permanent, according to whether one is dealing with a serious infection with patency of the choledochus or with an occlusion of this duct which can not be removed, or when an interference with the deeper tracts is incompatible with the general condition of the patient or contraindicated by the existing lesions

As to drainage by way of the choledochus, it may be said that in reality this is merely a direct drainage of the hepatic duct Formerly a drainage tube was simply placed in contact with the incision made in the choledochus, or inserted within its lumen, but at the present time the tube is pushed down to the origin of the hepatic duct, when the following conditions are present The principal indication is the presence of a calculus at the origin of the choledochus, whose presence has set up a serious infection of the liver, but, when once the calculus has been removed, the duct is found free on account of the dilatation which has taken place in the hepatic duct and all that is necessary is to introduce the drainage tube, pushing it up to the hilum of the liver Beside infection, which is the principal indication for drainage, the presence of suspected calculi at the origin of the hepatic duct should also be called to mind Direct drainage of the hepatic duct is of more recent date, its indications being serious infection and the suspected presence of calculi in the region of the hilum of the liver These indications are the same as those for drainage of the choledochus and consequently it is only done after removal of the calculi lodged in the hepatic duct I have referred to the objections which have been made to this method, but I may add that it is not an obligatory supplement to hepaticostotomy, because, if no serious infection is present, if the patency of the hepatic duct at the hilum is certain, if, on the other hand, it is impossible to re-establish the course of the bile either by way of the choledochus or the gall bladder, hepaticoenterostomy may be resorted to

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Cancer and Climate—The *Med Klinik* for February 24 quotes from a recent publication of the Amsterdam board of health giving the statistics of cancer in various cities and climates The figures show that climate seems to have no influence on the prevalence of cancer The report states that during 1905 Copenhagen recorded 154 deaths from cancer to 100 000 inhabitants Florence 146, Chicago, 59, Nice and Turin 72 and 74, Tokio, 57, Naples, 54, Stuttgart, 136, Zurich, 139, Lyons, 171, Cracow, 209, Berlin, 115, Paris, 114, London, 100, and Dresden, 105

SOME WELL-KNOWN SYNTHETIC CHEMICALS AND THEIR RELATION TO THE PURE FOOD AND DRUGS ACT *

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The word "synthetic," as used in the chemical world, means a combination of separate substances, elements or radicals, which result in the formation of definite chemicals The manufacture of acetanilid from benzol, or antipyrin from anilin, affords good illustrations, inasmuch as in the manufacture of both several operations are necessary The word "synthetic," however, has acquired an entirely different meaning, which has been used to a considerable extent in the past, usually in an honorable manner, but often for the purpose of deceiving not only the public, but physicians as well This feature has been claiming recognition in no unmistakable terms during the past few months It is held by some that the mixing together of the various cinchona alkaloidal salts, in proportion as found by analysis of the cinchona barks, the same dissolved in simple elixir and colored with caramel, is a "synthetic elixir of cinchona bark" Other illustrations are the common headache mixtures, which consisted in the past, and at present to a lesser extent, chiefly of acetanilid, sodium bicarbonate or ammonium carbonate and caffein These mixtures are at times so named as to lead to the belief that they are synthetic chemicals In some cases a hypothetical chemical name, together with a structural formula, is attached to make the deception even more complete Since the passage of the act the acetanilid has been replaced in many instances by para-acetphenetidin (commonly known as phenacetin) and antipyrin This subject will be considered in a subsequent portion of this paper It is also claimed that a so-called raspberry extract, made by dissolving various esters in alcohol (grain or wood) and coloring the solution with cudbear, is a "synthetic raspberry extract." There are undoubtedly different views as to whether or not the latter claims are justifiable, but in my opinion the first definition, or a similar one, is the only one that should receive any recognition in the chemical world As a matter of fact, the latter is simply used to attract the attention of the public and has no basis for existence whatever

The Food and Drugs Act specifies that an article is misbranded if it fails to bear a statement on the label of the package "of the quantity or proportion of any alcohol, morphin, opium, cocain, heroin, alpha or beta eucain, chloroform, cannabias indica, chloral hydrate, or acetanilid, or any derivative or preparation of any such substances contained therein" The act also forbids the use of any poisons or deleterious ingredients in the manufacture of food products or of any agent which misleads or deceives in any particular The two phases of the act just considered require first, that the presence of certain habit-forming drugs shall be declared on the label and, second, that no injurious agent or agents which deceive in any particular shall be used in the manufacture of food products

It can readily be seen by chemists familiar with the ingredients enumerated in the act that the phrase "derivative and preparation of same" is very comprehensive which was undoubtedly the intention of Congress This clause was undoubtedly introduced for the purpose of preventing or evading prosecutions under the law on pure technicalities For example, it has been held by the defendant in a number of cases in which a prosecution was brought, on the ground that a product contained the forbidden ingredient morphin, that the ingredient in the product under consideration was not morphin but morphin sulphate The same position has been taken in other cases, for example, it is contended by some manufacturers that a preparation in which cocain is introduced through the medium of an extract of coca leaves or by extracting coca leaves directly with the menstruum of the article, can not be considered a cocain preparation any more than could coffee be construed as a caffein product It is immaterial how cocain is introduced into a product, the fact of its presence renders such a product a cocain preparation Any other conclusion must be based on a technicality or is a mere quibble

So far as the word "preparation" is concerned as used in the act, there does not appear to be any question relative to its meaning, but this is not the case with the word "derivative" The term "derived from" as used in the tariff law of 1897 has not only been subject to decisions at the hands of the appraiser of the United States Customs Service, but has also been defined by the United States Federal Court (1899 Federal Reporter 719) and the United States Court of Appeals (102 Federal Reporter 603) The decisions arrived at are that the words "derive," "derivation" "derivative" must be interpreted as "made of" "prepared from" "produced from," "obtained from," and that the term "derived from" has its ordinary meaning of "produced from" and relates to the physical substance from which such product is obtained and not *to its chemical relationship* In other words, if the manufacturer starts with alizarin and by partial replacement produces a dye such dye is derived from alizarin, but not otherwise The question under consideration in the above decisions was whether or not certain dyes were derived from alizarin These precedents must undoubtedly be taken into consideration in connection with the recently-enacted pure food and drugs law, but the aims and objects of the latter are entirely different from those of the tariff law

The meaning of the term "derivative" as used in the act, has been called into question because (para) acetphenetidin is classed as a derivative of acetanilid There is no question but that (para) acetphenetidin is a derivative of acetanilid both chemically and physiologically and resembles it in its tendency to habit formation physiologic action and physical properties Furthermore treasury decision 13270 construes this chemical as an alcoholic medicinal preparation The exact status of this product under the law appears therefore, to be in a somewhat unsettled condition at present

In this paper only a few of the synthetic chemicals that are affected by the Federal Law will be considered For the purpose of ready reference it is deemed desirable to collect them into the following groups

ALCOHOL GROUP

Common names	Synonyms and Chemical [illegible]
Ether	Sulphuric ether ethyl ether
Ethyl acetate	Acetic ether
Ethyl nitrite	
Ethyl bromid	Monobromethane

CHLOROFORM AND CHLORAL HYDRATE GROUP

Chloroform	Trichloromethane
Chloral hydrate	Trichlorethidene glycol
Chlorotone	An[illegible]
Chloral alcoholate	Trichlorethidene

* Lecture delivered before the Chemical Section of the Franklin Institute Jan 10, 1907

	COCAIN GROUP
Alpha eucain	Benzoyl methyl tetra methyl gamma-oxy piperidin-carboxylic methyl ester
Beta-eucain	Benzoyl vinyl-diacetonalkamin hydrochlorid.
	OPIUM MORPHIN GROUP
Heroin	Diacetyl morphin.
Dionin	Ethyl morphin hydrochlorid
Peronin	Benzyl morphin hydrochlorid.
Codein	Methyl morphin
	ACETANILID GROUP
Acetanilid	Phenylacetamid antifebrin
Phenacetin	Para acet phenetidin, Acetphenetidin Para acet amido phenetol, Para-oxyethyl acetanilid.
Antipyrin	Analgesin Anodynin Parodyn Phenazon, Phenyl-dimethyl pyrazolon, Pyrazin
	PRESERVATIVE SWEETENING AND FLAVORING GROUP
Salicylic acid	Ortho-oxy benzoic acid.
Benzoic acid	
Vanillin	Methyl protocatechuic aldehyd
Saccharin	Benzosulphinid

In these groups it will be noticed that not only are the common names employed, but also the synonyms and structural formula names The object of giving the latter is simply to call attention to the fact that manufacturers are making frequent requests to be permitted to use some other words than those specifically enumerated in the act, for example, one manufacturer represents that a setting forth on the label of the fact that his product contains opium would be a financial loss, and asks whether it would not be satisfactory to state on the label that this product contains a certain amount of papaver somniferum Other manufacturers request that they be permitted to use the word phenylacetamid or the phrase "the monacetyl derivative of anilin" or the structural formula in place of the word acetanilid If it were permitted to use other words than those given in the act for the ingredients specifically covered there would soon be such a confusion of names and structural formula that it would be necessary to consult an expert organic chemist to decipher them

It is held by some writers that it was absolutely unwarranted to include some of the chemicals and products enumerated in the rules and regulations, because in many cases such articles are never used as habit-producing drugs In this connection it should be stated that this question was submitted to about twelve of the best pharmaceutical chemists, manufacturing and analytical, and while a few think that the public would be protected just as well without requiring a declaration on the label of the presence of certain drugs, yet on the whole every one heard from thus far suggested that additional products be included In other words, the suggestions of these men indicate that instead of having included too many drugs the list should be augmented Our general correspondence confirms this attitude It should, furthermore, be noted that it seems necessary to include certain chemicals in order to avoid technicalities, for example, it is held by one chemist that a certain chemical could not be considered a derivative of alcohol because ethyl bromid is not enumerated as a derivative of alcohol in the regulations, and inasmuch as this chemical is employed directly in introducing the ethyl group into the product it is necessary that this product be included as a derivative of alcohol The contention that certain ingredients are not used as habit-producing drugs is not well taken This claim is made for ether, which, as a matter of fact however is used to fortify beverages in order to render intoxication more rapid and complete particularly is this the case with individuals addicted to the alcohol habit and whom the ordinary beverage does not appear to satisfy

The morphin group presents some interesting features It is well known that morphin and opium and the disastrous results of their use have been widely exploited during the past few years, not only in the lay journals, but also to some extent in the public press Many manufacturers deem it expedient to remove these words from their labels if possible because of this unfavorable notoriety The result is that in many instances these ingredients have been replaced with other products which are not so well known to the public, for example, heroin, codein and dionin have replaced morphin in a considerable number of cases These chemicals are at present supposed not to produce such deleterious results on the human system as do opium and morphin, even when used over extended periods, but it is difficult at present even to conjecture what their promiscuous and indiscriminate use will bring forth in the future It is even now reported that where narcotic laws prohibit the indiscriminate sale of morphin and no restrictions whatever are placed on the sale of codein the latter product is being used in place of the former

What has been said in connection with the opium-morphin group applies equally to the acetanilid group At the time the Food and Drugs Act was passed there were approximately 500 headache and laxative preparations which contained acetanilid sold through the jobbing trade under various names It is a significant fact that the acetanilid in many of these preparations has been replaced by acetphenetidin (phenacetin), and we are also informed from various sections of the country that antipyrin is being employed for the same purpose Exactly why some of these changes have been made is not clearly apparent, because none of the substitutes are as cheap as acetanilid, although the price of each has been materially reduced within the past few years This is due largely to the fact that the patents covering these chemicals have lapsed, and the price has fallen in the case of acetphenetidin (phenacetin) from $16 00 to $1 00 a pound, and in the case of antipyrin from about $22 00 to $2 40 a pound, both in bulk The price of acetanilid in quantity at this writing is 25 cents a pound Another probable reason for replacing acetanilid is because acetphenetidin is supposed to have a less deleterious effect on the human system than the former, but at present this is an open question No one has thus far ventured to give this as an excuse for using antipyrin, because it is a well-known fact that the latter is the most dangerous of these three medicinal agents Two other potent factors, however, should be considered in this connection These are First, the deleterious effects of neither acetphenetidin nor antipyrin have been given any publicity and the public, therefore, has little knowledge of the meaning of the words acetphenetidin and antipyrin should their presence be declared on the label, second it was expected that both of these chemicals could be used indiscriminately in medicines without the necessity of declaring their presence on the label Acetphenetidin however, according to the rules and regulations made under the Food and Drugs Act, must be set forth on the label

The use of harmful preservatives in food products is forbidden The exact status of the harmful nature of certain preservatives is not definitely settled at present Among the most conspicuous preservatives used during recent years are the synthetic chemicals known as salicylic acid and benzoic acid and their salts The experimental results obtained in the Bureau of Chemistry in connection with salicylic acid and salicylates have just been published in Bulletin 84 part 2 from which part of the general conclusions are herewith quoted

There has been a general consensus of opinion among scientific men, including the medical profession, that salicylic acid and its compounds are very harmful substances, and the prejudice against this particular form of preservative is perhaps greater than against any other material used for preserving foods This is due not only to the belief in the injurious character of salicylic acid, but perhaps is especially due to the fact that it has in the past been so generally used as an antiseptic That salicylic acid should be singled out especially for condemnation among preservatives does not seem to be justified by the data which are presented and discussed in this bulletin That it is a harmful substance, however, seems to be well established by the data taken as a whole, but it appears to be a harmful substance of less virulence than has been generally supposed The addition of salicylic acid and salicylates to foods is, therefore, a process which is reprehensible in every respect, and leads to injury to the consumer, which, though in many cases not easily measured, must finally be productive of great harm

Benzoic acid and the benzoates are by many considered less harmful than the salicylates Whether or not this is correct remains to be established by future experiments and observations This much, however, is certain, that whenever it is possible, and usually it is, food products should be prepared without the use of any questionable preservative

Saccharin is generally employed as a sweetening agent and its use is largely of a deceptive character because the consumer usually believes when he is eating a food product sweetened with this chemical that the sweetening is due to some form of sugar The use of saccharin as a sweetening agent is not only common in food products, but also in medical remedies Saccharin is a most valuable agent in certain diseased conditions, but this does not justify its indiscriminate use Inasmuch as deceptions and misrepresentations of all kinds are prohibited under the act, the presence of this chemical should be declared on the label

The synthetic production of vanillin undoubtedly was one of the greatest scientific achievements and triumphs of chemistry Vanillin is a very valuable commodity It is claimed by many that flavoring preparations made with vanillin as a basis possess distinct advantages over extracts made from the vanilla bean There is no question whatever but that vanillin possesses certain merits not inherent in the vanilla bean, and it seems rather incomprehensible why manufacturers do not take advantage of this fact and sell vanillin preparations on their merits Let not vanillin in disguise deprive extract of vanilla of its time-honored reputation

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TINCTURE OF STROPHANTHUS

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Strophanthus has not rivaled digitalis in the extent of its use, except, perhaps, for a short time after the former was brought into prominence by Fraser This is somewhat remarkable in view of the fact that numerous investigators have found that the action of strophanthus presents certain advantages over that of digitalis thus, strophanthus and to a greater extent its active principle strophanthin act much more promptly than digitalis or digitoxin Fraenkel found that the action of a single effective dose of digitoxin was delayed for many hours beyond that of a corresponding dose of strophanthin and while he was unable to induce slowing of the cat's heart from a single non-toxic dose of digitoxin, a single non-toxic dose of strophanthin promptly proved effective Strophanthus produces much less vasoconstriction in the splanchnic area than digitoxin does, and while this is a disadvantage in shock, it is often desirable in producing diuresis since the constriction of the vessels in the kidney by digitoxin may seriously interfere with the diuretic action

Gottlieb and Magnus working with the isolated cat's heart, found that strophanthus caused practically no constriction of the coronary vessels in contrast with the action of digitoxin, with which the constriction was found to be so marked at times as to completely mask the other actions on the heart This must be of considerable importance when hypertrophy of the heart is the object sought, since these investigators have found that the actions of the two drugs on the heart are otherwise practically alike According to Fraenkel cumulative effects are not nearly so readily induced with strophanthin as with digitoxin

Strophanthin further possesses the following advantages over digitoxin It is much more soluble in water, it is not irritant, and, therefore may be injected hypodermically, it is much more active and not nearly so expensive as digitoxin

R Heinz states that the therapeutic effects of strophanthus are the same as those of digitalis, while strophanthus exhibits much less of the disagreeable side effects

With these evidences of its advantages it is well to inquire why strophanthus has not come into more general use, at least in suitable cases for I am not prepared to say that it should be used to the exclusion of the better-known drug

Heinz states that strophanthus fell into disfavor in Germany soon after its introduction owing to the fact that a number of species of widely varying activity were employed Some samples of the tincture were found to be but one-sixtieth as active as others Under the circumstances it was inevitable that the drug should fall into disrepute While I am not aware that any comparative tests were made of the strength of tinctures found in commerce in this country about the time of the introduction of the drug it is extremely probable that variability existed here to the same extent as that observed in Germany and naturally with the same inevitable result

Of late years strophanthus has been used with satisfactory results in Holland Belgium and France and that alone proves that a fair degree of uniformity in the preparation now obtains in those countries In order to determine whether a similar degree of uniformity now prevails here a number of samples of tincture of strophanthus were bought from as many drug stores on the east side in New York City and compared with tinctures carefully prepared by myself from the b[illegible] obtainable seed as well as with specimens pr[illegible] from samples of seed which had been on hand for d[illegible]ferent periods of time

Owing to the extreme difficulty in m[illegible] chemic[illegible] tests of these preparations the physiologi[illegible] advocated by Fraenkel was employed This con[illegible] in determining the amount ne[illegible]ary to [illegible] standstill of the ventric[illegible] [illegible] one hour Tests made [illegible] accurate and more [illegible] on frogs, and those [illegible]

experiments The degree of potency is usually shown rather strikingly in mammals by the rapidity of onset and the intensity of vomiting, as well as by the depression seen after varying doses That this is an index of the therapeutic activity is proved by the fact that pure strophanthin, which has been much used in pharmacologic investigations, presents no preceptible difference in its action.

While the bare figures given in the tables do not convey nearly so accurate an idea of the relative degree of potency of the several samples as one gets by actual observation of the experiment, they afford sufficient proof that we are not dealing with any great variation in strength

In this connection it should be borne in mind that the tincture of strophanthus, U S P, VIII, is of 10 per cent strength, whereas that of the previous edition was but half as strong, and the physician should assure himself that the patient gets the stronger preparation

For the purpose of the experiment the several tinctures were diluted so that one c c of the dilution represented one milligram of the seed, this was injected into the ventral lymph space in frogs and hypodermically in mammals While exactly uniform results were not obtained, as might be expected, the experiments showed a fair degree of uniformity not only in the various specimens bought in the open market and those freshly prepared, but a tincture made from seed which had been in this laboratory for at least sixteen years was found to be as potent as the standard One specimen of tincture bought from a drug store on the west side and kept in this laboratory for eighteen months showed the same degree of potency as the freshly-made preparations

The various samples of tincture were obtained as follows

No I Made in this laboratory from powdered seed obtained from Gilpin Langdon & Co, in the spring of 1905
No III Made in this laboratory from seed which had been in the laboratory for more than sixteen years
No IV Made in this laboratory from seed obtained from Gilpin, ngdon & Co in September 1906
No VI Bought at retail labeled Squibb s
No VII Bought at retail labeled Parke, Davis & Co U S P, 90
No VIII Bought at retail said to have been made from Gilpin Langdon & Co s ground drug
No IX Bought at retail labeled Sharpe & Dohme Age un known
No X Made in this laboratory from Gilpin Langdon & Co s ground drug Obtained in September 1906
No XI Bought at retail, labeled Parke Davis & Co U S P 1890
No XII Bought at retail labeled Squibb s.
Nos 11 and 5 were not used in this series of experiments

TABLE 1 —EXPERIMENTS ON FROGS

Specimen No	Dose—Equivalent of 10 per cent. tincture per 100 gms. frog	Result in One Hour
I	0 006 c.c.	Ventricular standstill (in 2 out of 3)
III	0 004 c.c.	Ventricular standstill
IV *	0 006 c.c.	Ventricular standstill.
VII	0 006 c.c.	Inconclusive (only three experiments)
VII	0 01 c.c.	Ventricular systolic standstill (invariably)
IX.	0 006 c.c.	Ventricular systolic standstill about one-half the experiments

* This amount was found to be the minimum quantity of this specimen required in a large number of experiments to produce ventricular systolic standstill fairly regularly then the same amount of other specimens was used for comparison.

To facilitate comparison of toxicity Table 3 is compiled from Table 2 without taking into account cumulative action which is not very important at this time, except with Specimen VI

The first five preliminary tests on cats were made to determine whether any degree of uniformity of action might be expected The results show a much closer agreement than had been anticipated, but it was seen that with such massive doses, killing so quickly, the interval before death would be more dependent on accidents of absorption than would be the case when some hours must elapse

As vomiting is such a common symptom, not only

TABLE 2 —EXPERIMENTS ON CATS AND DOGS *

Date	Animal No	Specimen No	Dose—equivalent of 10 per cent. tincture in c.c per Kg	Result
		CATS		
	1	X	0 17	Emesis in 20 min death in 43 min
	2	VI	0 17	Emesis in 15 min. death in 29 min
	3	VIII	0 17	Emesis in 18 min., death in 60 min
	4	VII	0 17	Emesis in 15 min. death in 44 min
	5	IV	0 1	Emesis in 17 min, death in 86 min
Dec. 19	7	I	0 0125	Emesis in 68 min, many times repeated.
Jan 23	7	I	0 01	Emesis in 2½ hours, but once.
Jan 24	7	I	0 0075	Emesis in 10 min, many times repeated
Jan. 28	7	XI	0 0125	Emesis in 47 min. many times.
Dec. 19	7a	I	0 0125	No effect
Dec. 21	7a	I	0 025	Emesis in 31 min many times.
Dec. 22	7a	I	0 05	Emesis in 7 min death in 36 min
Jan 25	9	VI	0 0125	Emesis in 2 hours
Jan 28	9	VIII	0 0125	Emesis in 1 hour, 50 min
Feb. 1	9	VIII	0 04	Emesis in 33 min death in 2 hours
Jan 28	10	III	0 0125	No effect.
Jan 30	10	III	0 0125	No effect.
Feb 1	10	VI	0 017	Emesis in 56 min
Feb 2	10	III	0 017	Emesis in 21 min (slight cumulative action)
	10	III	0 023	
	Total in half hour		0 04	Death in 4 hours
Jan. 28	11	VII	0 0125	No effect
Jan. 30	11	VII	0 0125	No effect
Jan 31	11	VII	0 017	No effect.
Feb 2	11	VII	0 017	Emesis in 53 min
	11	VII	0 023	
	Total in one hour		0 04	Emesis with great depression nearly fatal.
Feb 4	11	VII	0 04	Death in 83 min. (some cumulative action)
Jan 30	12	IX.	0 125	No effect.
Jan 31	12	IX	0 017	No effect.
Feb 1	12	XI	0 017	Emesis in 54 min but once
Feb 2	12	IX	0 017	Emesis in 12 min
	12	IX	0 023	
	Total in half hour		0 04	Emesis frequently repeated, nearly fatal
Feb 4	12	IX.	0 04	Emesis in 8 min death in 68 min
Jan. 30	13	III	0 04	Emesis in 37 min. great depression next day
Jan 31	13	III	0 04	Emesis in 17 min death in 60 min
Feb 8	14	VI	0 04	No effect
Feb 9	14	VI	0 04	No emesis, death in 44 min.
Feb 8	15	VII	0 04	Emesis in 74 min death in about 36 hours.
Feb. 8	16	XI	0 04	Emesis in 20 min death in 3 hours 15 min
Feb 11	17	XII	0 04	Emesis in 18 min death in 62 min.
		DOGS		
	1	I	0 04	Emesis many times repeated nearly fatal
	2	IX.	0 04	Emesis in 70 min death in 3 hours 5 min.

* While the rapidity of action in animals 1 to 5 affords a means of fairly accurate comparison it was thought preferable to employ amounts just sufficient to produce vomiting and others about the minimum fatal dose

after the tincture of strophanthus, but also after pure strophanthin, it was thought that this symptom might be used as an index of potency While this is true to a certain extent, the resistance to the action on the vomiting center is more variable than it is to the action on the heart, and it was, therefore, considered better to determine the amount necessary to produce systolic standstills, which is, of course, promptly followed by death, unlike the case in frogs in which there may be no visible outward symptoms for some hours after the heart ceases to beat.

TABLE 3

Specimen	Dose	Animal	Result
I.	0 04	Dog	Emesis and great depression almost fatal
III.	0 04	Cat.	Death in 4 hours.
VI	0 04	Cat.	No effect (tolerance)
VI	0 04	Cat.	Death in 44 min (total in 24 hours of 0 08)
VII	0 04	Cat.	Death in about 36 hours
VII.	0 04	Cat.	Emesis with great depression
VII	0 04	Cat.	Death in 83 min (second dose in 48 hours)
VIII.	0 04	Cat.	Death in 2 hours
IX.	0 04	Cat.	Great depression (0 017 given 24 hours previously)
IX	0.04	Cat.	Death in 68 min (dose given 48 hours after preceding)
IX.	0 04	Dog	Death in 3 hours 5 min
XI	0 04	Cat.	Death in 3 hours 15 min.
XII	0 04	Cat.	Death in 62 min

One-eightieth of a c c per Kg of the 10 per cent. tincture was the smallest initial dose which was found to produce vomiting, though less than a hundred and twenty-fifth of a c c was effective twenty-four hours after a somewhat larger dose On the other hand, cat 14 did not vomit after ten times this amount given in the course of two days, though death resulted speedily after the second dose

I wish to reiterate that the object of these experiments was not to show any exact uniformity in the action tincture of strophanthus from various sources, for this is manifestly impossible, but to prove that we have a vastly more uniform product than in the case of the preparation of digitalis

It may be remarked, wholly parenthetically, that these results do not confirm the charges which it has become the fashion to make in regard to the unreliability of the pharmacists of New York The various specimens were not obtained from the better class of stores but in most cases from those in the poorer quarters

In conclusion it may be stated positively that there is no difficulty in obtaining tincture of strophanthus in the open market of quite as nearly uniform potency as obtains in the case of tinctures of other drugs which are not standardized, and that the seeds do not undergo deterioration on being kept for several years, possessing in this respect a great advantage over digitalis leaves, which deteriorate rapidly despite care on the part of the pharmacist Digitalis continues to be of very variable strength, not only for the reason just stated, but owing to want of uniformity in the time of collection, methods of drying and source even when the official requirements are met. It should be remembered also that the strength of the infusion of digitalis varies greatly with the manner of preparing it, an infusion made from the powdered leaf much more nearly representing the full potency than one made from the leaf which has been merely broken up in the mortar, as is frequently the case

The Duty of the Hospital.—The medical institution is under obligation to administer its charity wisely, to aid in medical education, and to protect its staff from imposition —E B Young, M.D, in the *Bull of Am Acad of Med.*

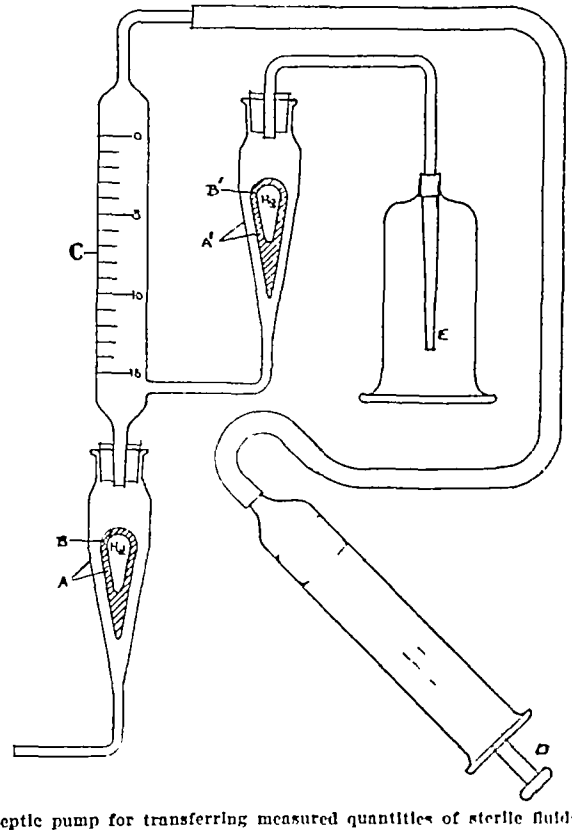
Clinical Notes

MEASURED QUANTITIES OF STERILE FLUIDS

PRELIMINARY COMMUNICATION

A PARKER HITCHENS, M.D
GLENOLDEN, PA.

Almost all the devices in use at the present time for filling tubes or bottles with definite quantities of fluid depend for the *vis a tergo* on the gravity of the fluid column When wishing to depart from this simple method, as is sometimes desirable or necessary, one is confronted with several difficulties To overcome these, rather expensive and complicated appliances are necessary, the manipulation of which requires considerable time The pump I have devised was suggested by the respirator sometimes used by chemists when working with dangerous gases



Aseptic pump for transferring measured quantities of sterile fluids

The apparatus consists of two glass valves, a graduated burette, and a piston syringe Each valve, A A, consists of a capsule into which is fitted a very carefully ground stopper, B B' These stoppers are weighted with mercury so that they will sink into place quickly and accurately These valves are connected with the graduated burette as shown in the diagram When traction is made on the piston D, the valve B is lifted and the fluid passes into the burette C When the suction ceases the valve settles and prevents the least regurgitation The piston D is now pushed into the syringe, pressure in this direction closes the valve B more tightly and opens the valve B which allows the fluid to pass out at the shielded delivery tube E

The pump is easily sterilized by allowing an antiseptic to stand in it for the proper length of time This antiseptic may be washed out with either sterile water or salt solution By the use of a spring or weight and stop one may easily arrange so that the burette will be filled automatically

SARCOMA OF THE TESTICLE

A L WOLBARST, M.D
Attending Genito-Urinary Surgeon, Beth Israel Hospital Dispensary
NEW YORK CITY

Tumors of the testicle are fairly often seen in genito-urinary practice, but their diagnosis is not always a simple matter Especially is this true of malignant growths, because of their close clinical resemblance to tuberculous and syphilitic deposits Hence the interest in the unusual case herein reported

When a man presents himself with an abnormally large testicle or a large mass in the scrotum, we have to think of numerous conditions that might be causative factors, and as a matter of clinical interest I have enumerated the following formidable list of possible conditions that must be thought of Tuberculosis, syphilis, malignant and benign growths, inflammatory and non-inflammatory orchitis and epididymitis, hydrocele, varicocele, hematocele, spermatocele, cystic growths, torsion of the testicle, intestinal hernia, contusions and wounds of the testicle, hemorrhagic infarcts of the testis, fungus, and general hypertrophy of the testicle

Most of these conditions are easily diagnosed Thus, varicocele is easily distinguished by the knotted and tortuous veins of the spermatic or pampiniform plexus which surround the spermatic cord In the average case this condition can not be mistaken for anything else In extreme cases, however, the loose mass of veins and their surrounding tissues constitute a well-defined tumor which must be differentiated from other tumors, it is soft and mushy to the touch and gives to the finger a characteristic sensation that has been described as resembling a bundle of worms in a bag The scrotum on the affected side is dragged down and elongated to a greater or less degree by this mass of veins and often assumes a purplish color

Hydrocele is often difficult to diagnose, especially as against the presence of hernia Unless tension be extreme, hydrocele is usually painless, and is thus distinguishable at once from inflammatory conditions There are no constitutional symptoms Its smooth, pear-shaped surface, absence of glandular involvement, and the normal testicle and epididymis when they can be felt, differentiate it from tuberculosis, cancer and cystic disease Fluctuation, irreducibility and in most cases translucency, as determined by the "light test," differentiate it from hernia, and, as a final measure, aspiration of its clear serous fluid removes all doubt as to the diagnosis Bloody fluid removed by the aspirating needle indicates the presence of an hematocele, unless, perchance the testicle has been wounded in the act of aspiration It should be remembered, however, that neither hydrocele nor hematocele precludes the presence of a malignant growth, on the contrary, the latter is often thus accompanied

Acute inflammation of the epididymis and testis proper is easily distinguished from malignant growths The acute onset, pain, tenderness, rise of temperature and other evidences of acute inflammation make the diagnosis simple enough, especially as these symptoms are usually associated with a history of gonorrhea or trauma In old men with prostatic hypertrophy, the possibility of the development of acute orchitis or epididymitis without apparent cause should always be borne in mind At the same time we should not forget the comparative frequency of recurrent attacks of epididymitis and orchitis months and even years after the predisposing gonorrhea has been forgotten by the patient. In obscure cases of inflammatory swelling of the testicle the presence of parotitis and other infectious diseases should be determined

Wounds, contusions and torsion of the testicle should not be mistaken for anything else, and similarly with that non-pathologic form of testicular hypertrophy which is often found as a compensatory physiologic condition, after one organ has been removed by disease or operation Sometimes a condition is met with in which one gland is abnormally large while the other is correspondingly small, neither condition is necessarily pathologic

Another fairly common tumor of the testicle is a collection of fluid either in the tunica vaginalis testis, or, as is more often the case, in a cyst in and about the epididymis This condition is known as spermatocele, or encysted hydrocele of the testicle The fluid is a milky serum containing the spermatic elements, principally spermatozoa These cysts may be small or large, they are usually found separating the epididymis from the testicle, and form a more or less irregular, pear-shaped, fluctuating tumor Sometimes more than one of these tumors will be noted When these cysts rupture into the tunica vaginalis, as they often do, they constitute the so-called spermatic hydrocele, which, in essence, is similar to the common form of hydrocele, except that the fluid contains spermatozoa

These spermatic cysts should not be confused with the less frequent cystic growths of the testicle proper—teratoma, benign and malignant cystic disease Clinically it is well-nigh impossible to differentiate one type from another

Patient—J S, aged 36, Russian, married, tailor by occupation, presented himself on Jan 13, 1906, with a large mass in the left side of the scrotum

History—Family and personal history negative as to gonorrhea, cancer, tuberculosis and syphilis Patient is the father of five healthy children, the youngest an infant a few days old, and of good health The testicular swelling, though considerably smaller than at the time of examination, had been present for about ten or eleven years, but only during the past ten months had it grown to the present great size There was little or no pain, except for the dragging sensation caused by the weight of the mass, pulling continuously on the cord and scrotum

Examination—From apex to base the mass was 7 inches long, 4½ inches in width and 13 inches in circumference at its widest part To the touch it was hard and tense, and in the upper portion fluctuation could be determined The testicle proper and the epididymis could not be distinguished There was no elevation of temperature, pulse was normal, appetite and general health good Heart, lungs and abdominal viscera were likewise normal There was no glandular enlargement anywhere in the body The patient believed that during the last few months he might have lost a few pounds in weight The urine was clear and normal in all respects, the prostate was normal in shape, size and consistency The seminal vesicles could not be felt Bacteriologic examination of the urine for tubercle bacilli was negative, the secretion from the massaged prostate revealed no gonococci nor tubercle bacilli

Subsequent History—Three days after the first visit I inserted a trocar and withdrew about three ounces of clear serum, which was also examined bacteriologically for tubercle bacilli with negative result After the fluid was withdrawn the testicle and epididymis were easily distinguished The former was about three times its normal size, hard and stony to the touch but not tender, except on excessive pressure The epididymis was at least four times its usual thickness, hard, nodular and of serpentine outline It was separated from the testicle proper by a distinct deep groove, but it did not present the so-called "clam shape" of Keyes

Diagnosis—Other conditions having been eliminated, there

remained to consider tuberculosis, syphilis and malignant disease The absence of tubercle bacilli in the hydrocele fluid and in the prostatic secretion, the absence of tubercular involvement of the prostate and seminal vesicles as well as the thoracic and visceral organs was considered strong enough evidence to eliminate tuberculosis For various reasons the tuberculin test could not at that time be made

Treatment—The patient was put on fairly large increasing doses of iodid of potassium (up to 100 grains three times daily), in addition to which he received two injections of salicylate of mercury (each containing 15 drops of a 10 per cent solution), the iodid was continued for about three weeks, but the injections were stopped because of the pain which followed As a substitute for the salicylate he was given half a dozen injections of a 1 per cent solution of mercuric iodid in oil, which were found to be quite painless and well tolerated After four weeks of this treatment it was seen that the mass had diminished slightly in size, but not sufficiently so to justify the belief that it would respond further Within a few days after the first aspiration the fluid returned and was again withdrawn This time it came out dark and bloody in contradistinction to the clear fluid withdrawn at the first tapping This operation was repeated at intervals of several weeks, and each time the same bloody fluid was withdrawn

Operation—On May 18 I removed the testicle and epididymis *en masse* and the patient made an uneventful and quick recovery Dr Jeffries, at the Polyclinic Hospital, made an examination of the tumor and reported it to have been a round celled sarcoma, showing cystic degeneration On September 10, three months after the operation, the patient, who had been under observation all this time, complained of a dull, heavy feeling in the upper gastric region On examination it was found that the left lobe of the liver was considerably enlarged and was exerting pressure on the pyloric end of the stomach The liver grew at an enormously rapid rate, the gastric symptoms increased and the man lost flesh and strength rapidly He was again put on antisyphilitic treatment with the hope of effecting some relief, but it was of no avail He was unable to continue at his work and returned to his birthplace in Russia I have not heard from him since

Apart from the difficulty in making a diagnosis without operation, this case presents these interesting features

1 The growth was present in a dormant stage for about ten years

2 For some unknown reason, the tumor took on a sudden growth, very rapid in its nature, and reached its maximum size in the comparatively short period of ten months

3 Careful search revealed the absence of metastatic deposits where such deposits might have been expected

4 The patient's general health did not apparently suffer at any time before removal of the tumor

5 The antisyphilitic treatment did have a slight ephemeral effect on the mass

6 Within three months after operation the liver showed metastatic deposits of an extremely malignant type, accompanied by great deterioration in general health for the first time

ADDENDA In a communication received March 24 1907 from Dr Herman Lorber, just returned from Vienna, the doctor writes "Perhaps you will be interested in a patient of yours whom I saw in the Krankenhaus in Vienna It was the patient with sarcoma of the testicle whom you showed at the medical meeting last year Professor von Noorden showed the patient He has lost considerable flesh and strength, the liver is enlarged considerably but the spleen even more so, and very hard The diagnosis of sarcoma was of course confirmed"

24 East One Hundred and Nineteenth Street.

Naming of Carbon Compounds—Hydroxyl is the monovalent group (OH)', considered as derived from water (hydrogen oxid)—*Pharm Rev*, August, 1906

COMPLETE RESTORATION OF FUNCTION OF TORN SPHINCTER ANI MUSCLE AFTER 23 YEARS OF ATROPHY AND DISUSE

ROBERT H M DAWBARN, M.D
NEW YORK CITY

The accusation is sometimes made that surgeons who have had the good luck to score an exceptional success are apt to rush into print and report it to the profession without waiting a reasonable time in which to ascertain whether or not the cure can properly be classed as a permanent one However I think we may consider the following patient definitely and permanently cured, whose case—possibly unique in point of time between her sphincteric loss and its restoration—I now publish for the first time six years after the operation My library search has not been thorough, and reports from those who have completely cured patients longer afflicted would be of interest

The patient a lady in the family of a physician in this city, states that she can now control, even during an occasional diarrhea, her bowel movements as perfectly

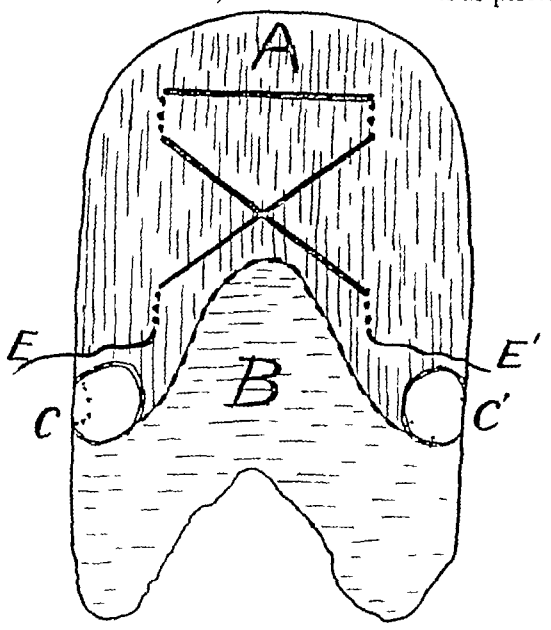


Fig 1—A the upper shaded part represents the raw surface of rear wall and sides of vagina from which the flap B the lower shaded part hangs down The arched broken line between A and B indicates the upper limit of the rectal and vaginal tear One must not dissect closely enough to this to threaten the blood supply of the flap C and C are the exposed ends of the sphincter ani The are brought together The apposition of the raw surfaces above will be helped by using as a first step the suture the ends of which L and E are to be tied together

as ever before the tear If this muscle, during such a great period of absolute disuse and atrophy can so retain the capability of restoration of function after the necessary operation it would seem that never in a lifetime is this power hopelessly lost and that it would never be unreasonable to hope that the power of any or all of the sphincters lost through injury might be regained

The following are briefly the essential facts of the case Twenty three years and nine days before the operation the patient was torn so badly during an instrumental birth that the tear, as [illegible] extended half way up the r[illegible] to the same level on the [illegible] In consequence one open[illegible] and during all the years

of her bowel movements Almost wholly disbarred from going into society, her misery during this period can readily be imagined

On November 27, 1900, I operated, assisted by Drs Charlton Wallace and J W D Maury, her family physician, Dr Stuart Close being present The technic employed was one which in its simplicity and application seems hard to improve on It was devised by Dr Ristine of Knoxville, Tenn, more than twelve years ago and its technic was published by him some years afterward in the *American Journal of Obstetrics and Diseases of Women* The details, accompanied by a rough sketch, which may serve better than words to make clear one or two steps, are as follows The rectum being empty and cleansed, is packed with gauze A horseshoe-shaped flap of mucous membrane, with its toe upward, is next outlined The incision for this begins on either side of the vagina at the ends of the torn and retracted sphincter ani The cut ascends on either side and meets at the toe, placed, in a case as bad as this, just as high as possible behind the cervix uteri—almost touching the cervix—so as to waste no length of flap that it is possible to secure With a tear only dividing the sphincter, and not the rectum, obviously the horseshoe cut need not ascend so high

The apron of the flap thus turned down will have its sound, i e., its mucous membrane surface toward the feces and its raw surface forward It will be dissected down as far as the upper end of the tear permits. If of proper length its lower or free ends should now hang as low as the anal level behind it Any excess of length of this apron is a protection, for the time, to the dissected flesh in front against accidental infection, and if it should not finally shrivel it can be snipped away

Search is next made for the torn sphincter, the ends of which must be freshened and then brought into mutual apposition by means of tanned or chromicised catgut The sphincter muscle, even in this case, could still be plainly recognized By dissecting down and lengthening the horseshoe ends as needed, tissue is at length reached which when seized and pulled on by the forceps an be felt to draw the sphincter on either end Before apposing these ends we should insert and tighten the continuous suture shown as E and E′ in the accompanying sketch This helps to prevent any "dead space." The curved needle is inserted and brought out but four times in passing this stitch Following the union of the sphincter the surgeon will probably perform the customary operation for torn perineum

Before concluding, a moderate section of the sphincter at the rear anal margin should be made (in a case recently torn) to weaken it temporarily—for protection against the tearing out of the important stitches uniting its ends Perhaps I need not say that in the case under discussion, after twenty-three years of disuse, it was thought unnecessary to weaken the sphincter further in this way When this is done no stitch is taken, a clot fills the tiny opening made by the slender blade The bowels are moved the second day and each day thereafter Electricity and strychnin are of value in aiding the sphincter to recover its function.

I would refer those especially interested to the article by Dr Charles G Child, Jr, of this city, in the *Journal of Obstetrics and Gynecology of the British Empire*, July to December, 1905 It will be found that in a few particulars my operation differs from that of Dr Ristine —the principle, however is his, as also should be the entire credit of this, one of the very few operations which seem to me perfect in technic

APPENDECTOMY DURING HERNIOTOMY

JOHN A. HAWKINS, M.D
Professor of Rectal Diseases in the Medical Department of the Western University of Pennsylvania Rectal Surgeon to St. Francis Hospital
PITTSBURG, PA.

The article by Dr John A Wyeth, in THE JOURNAL, Nov 24, 1906, reminded me of two patients on whom I recently operated.

The first patient, a man of 67, had suffered with a large inguinal hernia for many years On opening the sac I found that it contained the cecum, the adherent appendix and part of the ileum The appendix, though not inflamed, was removed, and the abdomen closed by the imbrication method of Fowler Recovery was uneventful

The second case was that of a woman of 62, who suffered from an inflamed bubonocele The sac contained a structure of whose identity I was not altogether certain until I had examined it closely, but which proved to be the appendix The constricted ring was incised and the hernia repaired by the Bassini method, the appendix being removed in the usual way There was nothing unusual about the recovery The appendix was 10 cm in length, 12 mm in diameter at the distal end and 4 mm at its attachment, being club shaped

219 Sixth Street

A CASE OF INFECTION BY STRONGYLOIDES INTESTINALIS *

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Visiting Physician to the Denver City and County Hospital
DENVER

This parasite, associated with Cochin-China diarrhea, has been reported so rarely in the United States that the following case should be recorded The exact relationship to tropical diarrheas seems not definitely established

Patient—A Japanese ship's cook, aged 40, was admitted to my service in the Denver City and County Hospital, Oct 18, 1906

History—We learned that he had visited many ports in Asia and other parts of the world, had been in America seven years, in Colorado three years He had been sick for ten weeks, although below par for three or four months He had a slight cough, had probably lost 20 or 30 pounds in weight, and was moderately anemic He had five to eight stools in the twenty four hours, mushy in consistence, foul smelling and of clay, slate or dark green color No blood nor mucus He complained of constant pain in the abdomen, and in the rectum on defecation He vomited a few times, especially after eating sweet food.

Examination—Physical examination of the chest and abdomen was negative. The urine was acid, sp gr 1030, a trace of albumin, no sugar, no bile, indican increased. A few small and narrow hyaline and granular casts, occasional blood cells and leucocytes The examination of the sputum was negative The blood, two weeks before death, showed Hemoglobin (Tallquist), 65 per cent, red cells, 3,200,000, white cells, 4,400 Moderate poikilocytosis and no megaloblasts nor normoblasts were found A differential count of white cells showed polynuclear neutrophiles, 51 5 per cent, lymphocytes, large and small, 47 per cent., eosinophiles, 05 per cent. The absence of eosinophilia is to be noted

Suspecting amebic dysentery, I asked Dr B B Blotz, in charge of the laboratory, to examine the stools His report is as follows

"Larvæ of the *Strongyloides intestinalis* were found in great numbers At least fifteen examinations were made and the parasite was present in each An attempt was made to obtain the adult by incubating the larvæ for seventy two hours at

* Reported with exhibition of specimens to the Denver City and County Medical Society No 6 1906

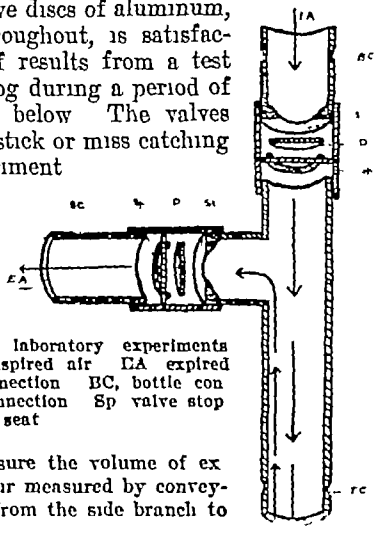
37 38 C This was unsuccessful At one examination a parasite was found having the same characteristics as the larvæ, but three times as long The ova of the parasite were not discovered Red blood cells and Charcot Leyden crystals were found at various times In the last two or three stools examined there were numerous black crystals, rhombic, quadrangular and needle shaped, probably of hematogenetic origin These crystals were also found in the vomitus A search was made for the ova of the ankylostoma duodenale, said to be often found in association with this parasite, but they were not discovered, nor could other ova be found During the last few days the patient vomited several times in each twenty four hours, and the parasites were abundant in the vomitus"

In every specimen of the fresh stools, mounted with water, under a power of 50 diameters, could be seen from five to thirty of the larvæ in active motion After an hour or two, most of them became immobile, but could be resuscitated by adding more water and warming the slide slightly The patient was fed on a liquid diet and given thymol in a dose of 15 grains three times a day At the suggestion of Dr Ralph Taylor, who had seen the parasite in his Philippine experience, 3 grains of santonin were added later Although the parasites lost their activity, so that but one or two sluggish ones could be found in a field, with perhaps a dozen dead ones, the patient steadily lost ground, and died on Nov 17, 1906 No autopsy could be obtained.

RESPIRATION VALVES

C C GUTHRIE, M.D
Professor of Physiology and Pharmacology, Washington University Medical School
ST LOUIS

The valves shown in the accompanying drawing were designed primarily for use in preventing the waste of volatile anesthetics that commonly occurs in mammalian experiments when a Wolff's bottle is used in connection with a trachea tube and for simplifying the measurement of expired air in such experiments Construction of plated brass with valve discs of aluminum, or of aluminum throughout, is satisfactory An average of results from a test made on an 8 Kg dog during a period of four hours is given below The valves were not observed to stick or miss catching throughout the experiment



Valve mechanism for laboratory experiments with respiration IA inspired air EA expired air SC, spirometer connection BC, bottle connection TC trachea connection Sp valve stop D valve disc St, valve seat

1 Animal with tube in trachea breathing through a Wolff's bottle arrangement Valves connected on the far side of the bottle in order to measure the volume of expired air Volume of air measured by conveying it through a tube from the side branch to a spirometer

2 Same arrangement as in 1, only the valves were inserted between the dog and bottle so that the *expired* air did not pass back through the bottle as in the first case

RESULTS

1 Amount of ether used per L of air 0 83 c.c
2 Amount of ether used per L. of air, 0 42 c.c

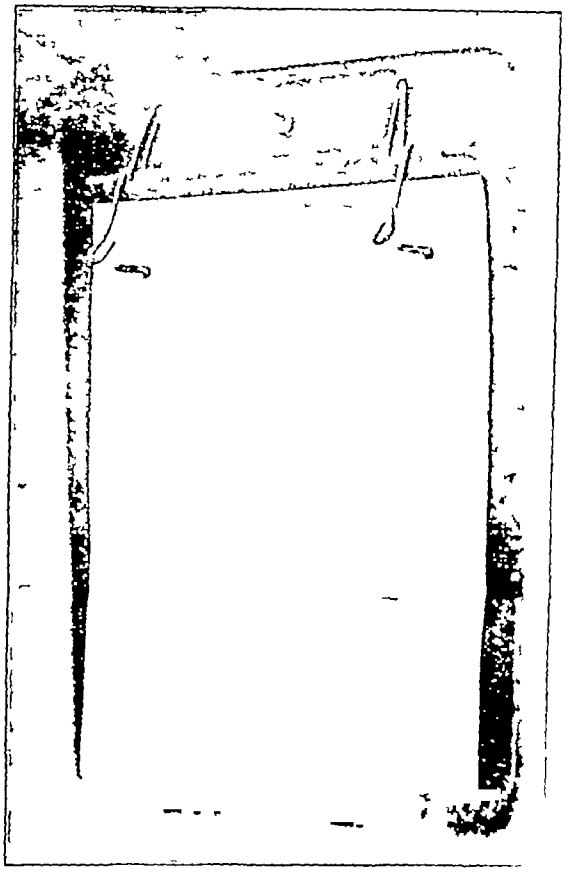
The average volume of expired air per minute was 3866 c c. For simplicity calling it 4 L, the amount of ether used per hour in 1 was 199.2 c.c, and in 2, 100 8 c.c.

The use of the valves also prevents contamination of the anesthetic contained in the bottle by condensation of moisture from the animal's breath

AN IMPROVED BEDSIDE CHARTHOLDER FOR HOSPITAL USE

J D SINGLEY, A M., M.D
Surgeon to the Pittsburg Hospital
PITTSBURG, PA

In this chartholder the back is a rigid light enameled metal plate The clamp or clip is of heavy wire and has two contact points, but instead of relying on metal or small rubber tips at the contact points, as in those on the market, two rings come in contact with the back Two upright pins about one inch high are set into the back over which the rings drop when the spring of the clamp is released The record sheets, after padding, are perforated, at a very slight cost, by the printer at the proper place for the pins



With such a holder the record sheets can only be released by exerting sufficient pressure to raise the ring of the clamp clear of the pin and lifting the sheets off the pin No adjustment is required to keep the various sheets in alignment while the proper sequence of the sheets remains as originally placed

812 North Highland Avenue

Malaria and Tuberculosis—P Cracieux has been investigating conditions in tropical Africa and Mexico, he found malarial antecedents in 70 per cent of the natives affected with tuberculosis He believes that this malarial infection paves the way for tuberculosis later and that it is absurd to claim that the native races are peculiarly predisposed to tuberculosis" They have only unusual opportunities for malarial infection, and this is the [illegible] tuberculosis His article opens the [illegible] 1907

"RUBBER TUBE PERCUSSION"

ARNOLD C KLEBS, M.D
CHICAGO

Dr F M Pottenger has recently recommended[1] immediate percussion with a rubber tube, which, he believes, is a "method of greater precision" and possessing "superior advantages over methods in common use."

The usefulness of all methods of percussion depends, of course, largely on the individual who uses them, good as well as bad results can be obtained with almost any method But a new clinical method must have both intrinsic as well as heuristic value, otherwise it constitutes merely an encumbrance to an already confusingly large diagnostic armamentarium

If we analyze Pottenger's announcement we find that he really does not describe a method, but merely advocates the use of a rubber tube instead of the hammer One naturally surmises, since nothing to the contrary is stated clearly, that the tube is to be used as one ordinarily uses the hammer or the finger, i e, with a rebounding blow We find some intimation, however, that here, unlike ordinary percussion, in which the percussor is retired as rapidly as possible so as not to deaden the vibration, the instrument is left where it struck It would have helped toward the understanding of the "new method" if this and other points had been made clearer The author also does not enlighten us on his contention that "with the use of the rubber tubing there is no noticeable thoracic resonance." Since the whole value of the "old method" is based primarily on the acoustic appreciation of modified thoracic resonance it would be rather interesting to know the author's scientific evidence which induces him to believe that with his tube he is able to produce isolated sounds emanating from the underlying organs He can not well imagine that the mere contact of a flexible, resilient tube can prevent this to a noticeable extent, and so give him "the simple tone of the underlying tissue" Contrary to his assumption, which also is in contradiction to all accepted theories of percussion and acoustics, I should think that he must get this "tone," plus that of the thoracic wall and plus that of the tubing itself Thus far we have tried to minimize the disturbing by-sounds by firmly adapting our finger or plessimeter to the chest wall

But the author is evidently out for results, not for theories, and so I have tried the "new method," adhering faithfully to his directions so far as they go I found that the tube when struck, indeed, emits a sound, but that the strength and quality of this sound is chiefly influenced by the length of the portion of the tube striking the chest (the length varying between 1½ and 2½ inches), by the length of tubing held in the hand and also by the pressure exerted on the tubing by the hand To a certain extent, of course, this sound inherent to the swinging tube is modified by the vibrations of the percussed object, but it needs a very discriminating ear to isolate it from the other by-sounds As to the sensation of resistance to which the author particularly directs attention as being "transmitted to the hand," I had none sufficiently perceptible to direct my judgment With some dexterity and after frequent application I was able to outline, though only very coarsely the organs of the chest. An exact direction of the stroke with a tube vibrating so easily in one's hand is an impossibility and this becomes painfully evident when one tries to percuss with it the dependent parts of the thorax in a patient lying in bed, or the axilla, or the apices Over the latter, the determination of their height, the outlining of the acoustic fields of Kronig, all important in the examination of tuberculous subjects, and the discovery of smaller foci of infiltration, easily determined by the common method, could in no way be facilitated by the use of the tube These negative results were corroborated by several able clinicians

It does not seem to me, therefore, that this *inventum novum* is destined to supplant the old methods which in the proper hands reach a high degree of perfection and are based on scientific facts Percussion is and will remain an art. An instrument, as such, I believe does not hinder perfection in it, though I do not make use of any, but a percussion tube that emits a sound of its own seems *a priori* unprofitable, to say the least

1 THE JOURNAL March 23 1907 1027

PROBABLE PLACENTAL TRANSMISSION OF TUBERCULOSIS

JOHN R. WILLIAMS, M.D
ROCHESTER, N Y

Because of the scarcity of data on the subject of placental transmission of tuberculosis, the following is deemed worthy of report

Patient—Mrs K, aged 30, American housewife, eight months pregnant

History—Patient complained of cough, night sweats, failing appetite and loss of weight, she gave a family history of tuberculosis, one sister who had lived and slept with her having died of the disease a short time previously

Examination—The chest anteriorly and posteriorly revealed typical signs of tuberculosis in apices of both lungs There was a loss of weight of 20 pounds in ten weeks in spite of pregnancy The sputum contained both elastic tissue and tubercle bacilli

Subsequent History—One month later, patient in normal labor, gave birth to a full term, apparently healthy, 7 pound boy The placenta and cord were immediately placed in 4 per cent formalin solution and sent to Dr A S Warthin, Ann Arbor, Mich, for examination The child was taken at once to another house, and was never afterward handled, nursed or brought in contact with the mother He was fed on modified milk, and for about six weeks made fair progress, gaining slightly in weight Then, in spite of the most studious care in feedings, he began to decline He was taken to the Infants Summer Hospital at Ontario Beach and kept there for some weeks, but to no avail The child, like the mother, now presented the typical signs of general tubercular involvement, which need not be detailed At this stage both mother and child were taken to the same house, although they were isolated from each other and had different nurses The mother declined rapidly after the termination of pregnancy, dying six months later The child outlived the mother by only one month Both patients were seen by several other physicians, all of whom concurred in the diagnoses

Dr Warthin, after a number of careful examinations, was unable to find any evidence of tuberculosis in the placenta The child died and was taken to a distant point for burial at a time when I was absent from the city, hence a postmortem study was not made, which is unfortunate, inasmuch as it robs the case of the confirmatory evidence necessary for a positive demonstration

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The School Girl—Dr James Fraunfelter, Canton, Ohio, states (*Ohio State Jour of Med*) that the development of the mind is largely dependent on the efficiency of the body, and that the expansion of the moral element so well expressed by the word 'character' is similarly intertwined in such close relationship that neglect of a part is derangement of the whole.

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES" THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W A PUCKNER, SECRETARY

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month)

(Continued from page 1109)

DIACETYL-MORPHINE HYDROCHLORIDE

Diacetyl morphine hydrochloride $C_{17}H_{17}(C_2H_3O)$ NO HCl is prepared by dissolving diacetyl morphine in dilute hydrochloric acid concentrating the neutral solution by evaporation and crystallizing

It is a white crystalline, odorless powder having a bitter taste showing a neutral reaction with congo and melting at 230 to 231° C. (446 to 447 8° F)

It is soluble in 2 parts of water and soluble also in alcohol but insoluble in ether

Its aqueous solutions are precipitated by alkaline hydroxides the precipitate being soluble in excess of the reagent, and by alkaline carbonates In other respects the reactions are the same as those given under diacetyl morphine (which see)

It is incompatible with alkalies and their carbonates, tannic acid and other precipitants of alkaloids. It is decomposed by mineral acids particularly when heated

Actions and Uses—When given in small doses Diacetyl-morphine Hydrochloride has apparently no effect on any of the vital functions except respiration, which it renders slower, the volume of the individual respirations being increased, but usually not sufficient to compensate the slowing, the result being a diminution in the total amount of air respired In large doses it may produce dizziness, nausea and occasionally constipation, and, in poisonous amounts, twitching of the extremities, great exhaustion, and dimness of vision may be added The temperature becomes subnormal and the pulse rapid and thready The habit is readily formed and leads to the most deplorable results It is said not to produce costiveness (This is not true, according to some observers) It is readily absorbed from mucous membranes It lessens irritability of the respiratory center, thus allaying cough, but does not depress the respiration as much as morphine

On withdrawing the drug from habitués there is said to be a tendency to respiratory failure which may be dangerous

Diacetyl-morphine and its hydrochloride are recommended chiefly for the treatment of diseases of the air passages attended with cough, difficult breathing and spasm, such as the different forms of bronchitis, pneumonia, consumption, asthma, whooping cough, laryngitis, and certain forms of hay fever It has also been recommended as an analgesic, in the place of morphine in various painful affections

Toxic symptoms should be treated by the administration of caffeine hypodermically and of hot coffee by the stomach To avoid respiratory failure in the treatment of diacetyl-morphine addiction, it has been suggested to substitute morphine for the diacetyl-morphine and then treat the patient for morphine addiction

Dosage—0 0025 to 0 005 Gm (1/24 to 1/12 grain) to adults 3 to 4 times a day, the maximum dose being 0 01 Gm 1/6 grain To children it may be given in doses varying from 0 0002 to 0 001 Gm (1/300 to 1/60 grain), according to the age Hypodermically it may be administered in the form of a 2 per cent solution in the same doses It has been applied locally to the throat, to the uterus on tampons and by suppository for painful pelvic affections generally, but there is no evidence that it produces any local anesthetic action

HEROIN

A name applied to Diacetyl-morphine, which see

Manufactured by Farbenfabriken vorm Friedr Bayer & Co., Elberfeld Germany (Continental Color & Chemical Co New York) U S trademark.

HEROIN HYDROCHLORIDE

A name applied to Diacetyl-morphine Hydrochloride, which see

Manufactured by Farbenfabriken vorm Friedr Bayer & Co Elberfeld Germany (Continental Color & Chemical Co New York) U S trademark.

LECITHIN

The esters of oleic, stearic, palmitic or other fatty acid with glycerophosphoric acid combined with cholin, occurring in combination with proteids in many animal and vegetable tissues, especially in nervous matter and egg-yolk

Lecithin is best prepared from egg yolk (in which it exists as vitellin) by dissolving out the lecithin by strong alcohol

It is a yellowish brown waxy solid of peculiar odor soluble in an equal volume of cold absolute alcohol readily soluble in chloroform petroleum benzin and fats less readily in ether It is insoluble in water but swells, giving the peculiar myeline forms and decomposes on prolonged contact. It is hygroscopic on exposure to air

The alcoholic solution is precipitated by platinum or cadmium chloride. It is decomposed by alkalies with the formation of choline and trimethylamine The ash contains phosphoric acid. The different lecithins contain from 3 84 to 4 12 per cent. of phosphorus and 1 73 to 1 86 per cent of nitrogen The ratio of nitrogen to phosphorus should be as 1 to 2 21

Lecithin is incompatible with alkalies It should be kept in well stoppered bottles and should be protected from the light

Actions and Uses—Lecithin acts as a stimulant to nutrition and not as a direct nutrient The number of the red blood corpuscles and the amount of hemoglobin are increased There is also a slight increase in the proportion of large mononuclear leucocytes The appetite is improved and there is a retention of nitrogen and a diminution in the excretion of phosphoric and sulphuric acids, indicating a storage of proteids The uric acid is perhaps slightly diminished Lecithin, even in large doses, is not toxic

The ordinary diet contains from 5 to 15 Gm (75 to 225 grains), and some observers claim that the benefits of the administration of lecithin can be obtained by an increased use of lecithin-containing food (eggs etc) but others claim that the raw or combined lecithin is ineffective

Lecithin is held to be useful wherever there is faulty nutrition or growth, and is especially recommended as an addition to cow's milk for artificially fed infants If no improvement results after ten days' treatment it is stated that it is useless to continue the drug

Dosage—It may be given by mouth in dose of 0 1 to 0 5 Gm (1 5 to 8 grains) per day in pill form before meals or, hypodermically 1 Cc (15 minims) of a 5 per cent solution in oil, daily Infants one third of these doses

(To be continued)

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[For other information see second page following reading matter]

SATURDAY, APRIL 6, 1907

EXPERIMENTAL GASTRIC ULCER.

The importance of discovering a definite method by which can be produced experimentally ulcers in the stomach that in every way are analogous to genuine human gastric ulcer needs no emphasis The prevention and the healing of human ulcers would thereby unquestionably be promoted in various ways Recently reports have been made of results in this field of experimentation which indicate that noteworthy progress is being achieved Thus Turck[1] has shown that by feeding dogs for variable periods with large quantities of cultures of colon bacilli ulcers not unlike round or peptic ulcer in man may be produced in the stomach and duodenum The exact mechanism whereby ulcers are produced under these conditions has not been worked out, but the indications point to a combination of local and general disturbances It would seem that the method, if found by other investigators to give reliable and constant results, will prove of considerable value for the study of experimental gastric pathology

By careful study of guinea-pigs used in testing diphtheria antitoxin, Rosenau and Anderson of the Hygienic Laboratory found that in more than one-half of these animals dying before the tenth day after injection of diphtheria toxin there is present a sharply defined area of congestion, hemorrhage, or ulceration near or at the pyloric extremity of the stomach In no case was perforation observed Animals that recover from sub-lethal doses of toxin may show evidences of having had this lesion and it would seem as if we have in diphtheria toxin a definite means for the experimental production of gastric ulcers, at least in the guinea-pig, and it is to be hoped that the possibilities of this method will be thoroughly investigated

Probably the results obtained by Futterer[2] in rabbits have the greatest immediate bearing on the clinical and therapeutic phases of human gastric ulcer So far as can be made out, Fütterer's present method of procedure is to excise a small piece of the mucous membrane of the stomach and then to maintain the animals in a state of chronic anemia by administration of blood-destroying chemical substances Macroscopically and microscopically the ulcers so obtained resemble the human ulcer markedly, like the human ulcer they appear to prefer, so to speak, the pyloric region in the vicinity of the smaller curvature, and their chronic course is held by Futterer to be in large measure if not wholly dependent on continuation of general anemia From the fact that anemia is so essential for the initiation and the continuance of experimental gastric ulcer, Futterer draws the conclusion that much may be accomplished by way of therapy, both preventive and curative, if the physician pay due regard to the condition of the blood The apparent ease with which ulcers may be produced by Futterer's method indicates that it too may prove of service in the further experimental study of gastric ulcer, which naturally will concern itself with the finer mechanisms of causation, and with the effect of various means and conditions on established ulcers

An interesting question arises in connection with these various methods and that is whether or not the ulcers produced by their means are alike in their essential features In order to determine this point careful comparative morphologic studies must be made of the ulcers at the various stages of their development In his ulcers Turck describes a remarkable hyperplasia of acid cells, the analogue of which does not seem to have been observed so far in the case of human ulcers Now it would be interesting to learn if ulcers produced by other and different means are associated with this hyperplasia Human material, especially such as would illustrate the earlier stages of the formation of ulcer, should be collected for careful study and comparison with experimental ulcers

1 THE JOURNAL A. M. A. 1906 xlvi, 1753
2 Festschrift für Rindfleisch 1907, p 81

THE RELATION OF THE STREPTOCOCCUS TO SCARLET FEVER.

Notwithstanding the immense amount of investigation devoted to it, the etiology of the acute exanthemata still remains more or less of a mystery It is true that in certain diseases, variola and scarlet fever for example, supposed protozoan parasites have been described which are thought to bear an etiologic relationship to these diseases It can not be said, however, that these parasites have been generally accepted as the true causes of the diseases in question, for they have not yet been shown to be constantly associated with the lesions, and some observers even question their parasitic nature and regard them, like the so-called cancer parasites, as peculiar cell inclusions In the case of scarlet fever the *Cyclaster scarlatinalis* of Mallory has not been generally accepted, for while some have conceded its parasitic nature others have denied this The question of the etiology of this disease is still under discussion, and Dr Hektoen's paper in this issue of THE JOURNAL[1] gives in a terse and critical manner the views of those who are opposed to the view that scarlet fever is caused by a protozoon and believe that it is a form of streptococcus infection, and at the same time the objections to the streptococcus theory are impartially set forth

1 Page 1158

As Hektoen's paper shows, there is much evidence which suggests a possible relationship between scarlet fever and some variety of the streptococcus On the one hand we have proof that in the vast majority of fatal cases of scarlet fever the streptococcus is present, on the other hand we have the knowledge that streptococcus infections apart from scarlet fever may be associated with throat and skin symptoms almost indistinguishable from true scarlatinal infection Not only are so-called surgical and puerperal scarlet fever of streptococcal origin, though not true scarlet fever, but in certain streptococcal throat infections skin lesions almost impossible to differentiate from the true disease may occur

All this, however, is not evidence that the streptococcus is the actual cause of scarlet fever It does show that this organism is very frequently associated with the disease and is probably responsible for the great mass of fatalities, but there is evidence that fatal cases of scarlet fever can occur, especially the fulminating ones, in which streptococci are not present The lack of streptococci in the infectious skin scales, their relatively poor resistance as compared with the known resistance of scarlet fever virus, and their occasional complete absence in some fatal cases, make it seem likely that the streptococcus is not the cause of scarlet fever, but merely a secondary invader It is well known that this micro-organism plays a similar rôle in smallpox, a type of disease analogous to scarlet fever Even if we assume that the rôle played by the streptococcus is a secondary one, we must not forget that it causes most of the fatalities, and one of our constant cares in the disease should be to protect the patient from the first against possible infection from other patients who harbor streptococci

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GOVERNMENT SUPERVISION OF VACCINE VIRUS

The efforts recently made in Pennsylvania and Connecticut to secure the repeal of statutes making the vaccination of children a condition of their right to attend public schools recalls the unreasonable prejudice that still exists against this beneficent prophylactic

The opposition to vaccination appears to rest on the fundamental declarations that it is useless and dangerous, and that its compulsory enforcement is an invasion of individual rights With the evidence now available it would seem that its utility must be conceded, for if there is one measure in preventive medicine that has been demonstrated beyond question it is that vaccination, properly performed affords protection against smallpox Individual license to do as one pleases is not an inalienable right, and community life denies the individual that privilege, especially if in so doing he becomes a menace to the public health By a uniform course of decisions the courts have upheld the legality of laws requiring vaccination as a condition precedent to the right to attend school[1] The right of the community for the public welfare to enforce vaccination has also been affirmed The dangers of vaccination, greatly exaggerated at all times, have now been reduced to a minimum Practically the only danger remaining is accidental infection such as may occur in any open wound This, in vaccination wounds, may be eliminated in a great measure by observing careful technic in performing the operation

Reference has previously been made[2] to the beneficial results following the government control of vaccine virus, and it is now understood that, in accordance with an additional regulation issued March 13, 1906 by the Secretary of the Treasury, at the instance of the Public Health and Marine-Hospital Service, each lot of vaccine virus must be examined bacteriologically by the manufacturer to determine its freedom from pathogenic micro-organisms, and a special examination is required of every lot to determine the absence of tetanus This supervision is no doubt largely responsible for the improved character of the vaccine virus now offered on the market in this country

The Annual Report of the Public Health and Marine-Hospital Service, just issued, contains a list of establishments manufacturing this product under government license Samples of the products of these firms are purchased from time to time on the open market and examined in the Hygienic Laboratory for purity and potency These laboratory examinations indicated great improvement in the quality of vaccine virus following the administration of the law approved July 1, 1902 regulating the manufacture, barter and sale of viruses, serums, toxins and analogous products With the view of obtaining information as to whether or not the practical results coincided with the laboratory data, the Surgeon-General addressed a circular letter to local health officers throughout the country for facts concerning the relative incidence of sore arms accompanying vaccinations during the winter 1904-1905 as compared with previous seasons Nine hundred and fifty-one replies were received to this inquiry, of which 237 gave no data 8 of the replies stated that there were more sore arms reported, one of these however attributing the complication to other causes than the character of the virus, 52 stated that they had not observed any difference in the number of sore arms during the year while 554 reported that there had been fewer sore arms[3] It is known that the operation of this law has prevented the sale in interstate traffic of "green" virus and from this report it is evident that marked improvement in the character of vaccine virus has taken place

Evidence of this character should be carefully considered by legislative bodies before action is taken looking to the repeal of vaccination laws now on the statute as such a step can but be regarded as a retrogr[illegible] in preventive medicine

1 Dock Amer Jour Med Sciences February 1907

2 The Journal A M A, Dec [illegible]
3 Annual Report Public H[illegible] 1906

THE HOUSING PROBLEM

The relation of the dwelling to health constitutes a problem, the seriousness of which the medical profession in this country has not yet fully appreciated To the physician in Europe it appeals with force, since the defects of housing, especially of the lower classes, are much more apparent there than here In Berlin, according to E Roth,[1] 43 per cent of all householders live in apartments of one room, and that often unheated, and more than 70 per cent must be content with one or two rooms as the most comfortable dwelling which they can afford These miserable conditions are made worse by the fact that the rent of such rooms is so high that it must be reduced by taking lodgers or roomers The number of people to a house tends to increase as time goes on, having risen in Berlin from 71 to 77 in the decade from 1890 to 1900 In addition to the danger to health from overcrowding, problems are presented in consequence of dampness, insufficient light and poor ventilation, which are of vital interest to the physician Roth attributes rheumatism, catarrh, colds and an increased susceptibility to infection to the dampness of the apartments, especially of those used for sleeping This defect may be due to the improper use of the house especially for washing, drying clothes, etc, but much of the dampness is due to faults in the location or construction of the building Another important matter in relation to health resulting from the location of the dwelling is the noise occasioned by factories, railroads, and street traffic Some of this noise is unavoidable in a large city, while part of it may be lessened by judicious police regulations, but the power of the police is limited to suppressing such noises as can be shown to be detrimental to the health of the citizens The exact effect of such noise is undetermined, but it is probable that it is a factor in the causation of that product of modern civilization, neurasthenia

In this country the increasing popularity of flat life is creating a problem that sooner or later must be met and solved Such a life is essentially an unnatural one A majority of flats, although provided with modern conveniences in the way of heat, water supply and artificial light, are so constructed that one or more of the rooms can never be exposed, either directly or indirectly, to the sun's rays, in many cases requiring artificial light for their illumination That such rooms furnish ideal conditions for the development of germ life is evident Too often it is the case that bedrooms or water closets are ventilated and lighted only by an air shaft—and this, too in the apartment buildings of the better grade Such conditions are inimical to the health of those living in such a building To the health of the housewife in particular is flat life prejudicial Add to the unnatural excitement of city life the lack of facilities, in the way of gardening, etc for her to get near to Nature and the psychical effect of being more or less closely confined within the narrow limits of her apartment, and we have conditions that predispose to the development of any latent neurotic tendencies which may exist

The regulation of building and the provision of sanitary dwellings is emphatically a medico-social function, in the performance of which the physician must take a leading part by virtue of his special knowledge He can be of assistance in framing suitable laws and in advising proper police regulations The German physician comes in touch with this problem also through his services to the societies for industrial insurance against illness The American physician, although less likely to find such a sphere of influence, will have abundant opportunity to advise his private patients regarding their choice of a residence While the housing problem is not as acute in America as in Europe, we should not allow the opportunity to pass for the establishment of laws and regulations which will prevent the development of a situation so favorable to disease and immorality By acting with a wise foresight, we shall be fulfilling our highest duty as guardians of the public health

1 Zeitsch f aerzt Fortbildung March 15 1907

THE NUMERICAL RELATION OF THE SEXES

Statistics of births are now complete enough to afford a fairly reliable basis for some interesting conclusions These are made the subject of an elaborate study by J B Nichols,[1] who has obtained data aggregating 693,785,722 living births and 13,635,986 stillbirths, or 707,421,708 births in all These data are chiefly supplied by the exhaustive compilation of birth statistics published in *Statistique générale de la France*[2] supplemented by some data from original and other sources The statistics regarding illegitimate births are of questionable value in consequence of the incomplete report and registration of these births, and, therefore, the estimate of total births is subject to some doubt Some problems relating to the proportion of sexes have either received insufficient investigation or the data are imperfect so that a definite conclusion can not be given This is true of the relations to war, climate, race, country and city, age, vigor, and social and financial condition of the parents, etc Leaving these out of consideration, the principal conclusions established by this study are The proportion of males to females at the age of differentiation of the sexes is higher than at any subsequent period and closely approaches the ratio of 1,063 sons to 1,000 daughters, more male fetuses die during pregnancy than female, and more males are still-born than females, so that the proportion of males to females among children born living averages, among peoples of the white race, 1,057 to 1,000 Among illegitimate children the proportion of males to females is lower, both of those born living and of those who perish during pregnancy, than in the case of legitimate births The greater relative mortality of the male sex extends

1 Mem American Anthropological Assn February 1907 I part 4

2 Statistique annuelle du mouvement de la population 1903 xxxiii

in a marked degree through the first year of life and in a diminishing ratio thereafter These statistics seem to indicate a slight relative weakness of the male sex which, after all allowances have been made for accidents at birth in consequence of larger size, seems to exhibit less power of resistance to the causes of disease than the female The proportion of sons is greater in large families than in small ones, Nichols asserts, but progressively decreases as the number at a birth increases After all, however, while these studies and deductions are interesting and suggestive, they can not be regarded as safe bases for forming conclusions that may be accepted as satisfactory

THE AGE LIMIT

Railroad managers, who are generally understood to know their own interests and those of the corporations under their charge, are undergoing apparently a change of views, at least in some cases, as to the expediency of excluding men of full majority or middle age from employment If this is as we must suppose the result of experience, it means that the man of over 35 has been found to have still a reasonably long period of usefulness before him, even in the trying duties of a railroad employé Heretofore it has been the theory that it is not profitable for roads to employ men over this age, and this, it seems, has been found too narrow a limit While there is no doubt that many men are at their best efficiency before the fourth decade has passed, it does not necessarily follow that this is always the case or that there are not frequently greater possibilities for usefulness after that period than before General rules are not capable of too universal application, and there are many occupations in which a rigid rule regarding age limit would be unprofitable The fact that the railroad companies are apparently beginning to recognize this truth is significant Young men will always be to the fore in many lines, but much of the best work will always be done by men somewhat more advanced in years It is probable that of late years we have placed the age limit unreasonably low

SANITATION AND ETHICS

In a recent issue of THE JOURNAL[1] editorial notice was given to the statements of Dr Solis-Cohen regarding the sanitary effects of some of the Jewish ritual observances The Jewish religion is not altogether peculiar in this respect and Christianity has inherited from the Jews some valuable sanitary practices, one of the most important of which, the seventh day rest, was not specially emphasized by Dr Solis-Cohen That it is not universally observed in Christian populations is admitted, but that it would be better if it were probably no physician would deny The institution of Lent was undoubtedly a saving ordinance from a sanitary point of view during a considerable period of the world s history, and in many countries it probably still has a beneficial effect on the public health The change from a salt meat diet, which was for many centuries largely the rule during the winter months in Europe, to a more or less exclusively vegetable one was a salutary measure that would hardly have been thought of, much less adopted, save for the injunctions of religion In some respects, however, religious practices have been directly insanitary, and this was particularly the case during the Middle Ages under the influence of the asceticism of that time Taking into account other religions than Christianity one would not have to look far for plenty of evidence of the conflict between religious observances and enlightened sanitation Christianity and Judaism stand almost alone among religions in that regard for human life and welfare which is the basis of all sanitary regulations Even in the most enlightened of heathen nations sanitary science is practically non-existent save where it has been introduced through the influence of Christian nations Whatever is conducive to the moral well-being of a people also raises its physical standards and so far as religions conform to moral concepts so far are they favorable to physical as well as to moral welfare The sanitarian in his practical teachings if not in his theories, is also a moralist This is a truism that does not always appear as self-evident as it should

1 Ritualistic Sanitation of the Jews THE JOURNAL, March 2 1907 801

THE MEDICAL INSTITUTE' FRAUDS

Advertising quacks, having as a rule a certain definite line of treatment (?) for all patients have long been known to fabricate the diagnoses of their victims ailments to suit such treatment The knocking down of these men of straw, in fact, constitutes the theatrical side of their business Most of these concerns at least have been consistent enough to have some slight degree of relationship between their diagnoses and their treatments In the suit instituted against the "Wisconsin Medical Institute" recently mentioned in these columns it appears that even the element of consistency is sometimes lacking According to the testimony of the "doctor" employed by the institute not only were false diagnoses given, but the treatment (?) instituted would not have helped the patients even had the diagnosis been correct The testimony was fortified by the fact that the physician in question was an unwilling witness and that his statements had to be drawn out by sharp questioning on the part of the state s attorney Medical and surgical institutes of the advertising type have been profitable concerns in the past and such testimony indicates the reason A few more prosecutions actively carried out and the details thoroughly ventilated in the public press, ought not only to put some of these concerns out of commission but give the business generally a sort of advertisement that would make it less profitable in the future Unfortunately the worst of the establishments are the most invulnerable on account of the difficulty of obtaining the testimony of those who have put their reputations in their power

Farming for the Insane—I am fully convinced that [illegible] thoroughly equipped farm properly conducted [illegible] to the cure of the insane than any [illegible] may resort to—W L Taylor MD *Commons*

Medical News

ALABAMA

Sputum Cups—Dr Gaston J Greil, health officer of Montgomery, will distribute gratis 500 sputum cups to consumptives who apply

Hospital Notes—Dr J C Moore, Anniston, has converted his residence into a private sanitarium, with accommodation for eight patients The hospital will be open for the use of the practitioners of the city

Personal—Dr Richard F Michels, Montgomery, celebrated on March 9 the sixtieth anniversary of his entering the practice of medicine——Dr Shirley Bragg, Montgomery, was recently appointed state inspector of jails, almshouses and cotton factories——Dr John W Watts, Birmingham, has been selected as physician for the Birmingham convict camp, and Dr John C McLeod, Bay Minette, for the Dolive camp

Society Meeting—The De Kalb County Medical Society, at its annual election, held at Fort Payne, elected Dr Sidney J Vann, Collinsville, president Dr William S Duff, Fort Payne, vice president, and Dr Wiliam E Quinn, Fort Payne, secretary treasurer——At a meeting of the Medical Society of Colbert County, held in Tuscumbia, March 21, the following officers were elected President, Dr Taylor H. Henry, vice president, Dr Julius T Haney, and Drs H W Blair and Morriss Henry, censors

Government Takes Over Quarantine—On April 1 the United States Public Health and Marine Hospital Service has directed Dr Edward Francis, in charge of the Mobile Marine Hospital, to assume control of quarantine at Mobile and to begin the inspection at Fort Morgan of all tropical vessels Dr Rhett Goode, president of the quarantine board of Mobile Bay, has been advised that the government has approved the sale of the local quarantine station and has received a check for $18,000, covering the purchase

Medical College Transfer—At a meeting of the faculty of the Medical Department of the University of Alabama the building and contents formerly known as the Mobile Medical College was turned over to the medical department of the university The present members of the faculty were reappointed The first payment on the appropriation made by the state for the improvement of the institution will, it is understood be made April 1 Commencement exercises of the Medical Department of the University of Alabama will be held April 15

ARKANSAS

Physician in Trouble—Dr Oscar S Burrow, Hot Springs charged with violating the drumming ordinance, was found guilty and his license to practice was revoked and a fine of $100 assessed

Personal—Dr W B Welch Fayetteville, was seriously hurt by a fall at Fort Smith March 20——Dr A L Carmichael, Little Rock, has been elected by the State Board of Charities to fill the unexpired term of Dr A J Harrison as physician for the charitable institutions

Society Meetings.—The Saline County Medical Society, at its recent meeting held at Benton elected Dr John W Melton, Alum, president Dr Charles Prickett, Traskwood, vice president and Dr Charles J Steed Hurricane secretary treasurer——At the annual meeting of the Lincoln County Medical Association, held at Star City the following officers were elected President Dr J K McClain Star City, vice-president, Dr John T Palmer Varner secretary treasurer Dr Benjamin F Tarver Star City, censors, Drs W C Kimbro, Tyro, and Charles W Dixon delegate to the state medical association, Dr John T Palmer Varner and alternate, Dr J F Johns——At the annual meeting of the Tenth Councilor District, or Northwest Arkansas Medical Association, held at Fort Smith, March 20 about fifty members were present Dr J N McCormack delivered an address to the public at the high school auditorium and the following officers were elected President, Dr W N Yates Fayetteville vice-president Dr James J Smith Paris secretary Dr James A Foltz Fort Smith, treasurer Dr O M Bourland Van Buren Fayetteville was selected as the place for the next meeting

CALIFORNIA

Building for Physicians—The Sawyer building, eight stories high of steel construction at present being erected at Sutter and Jones streets San Francisco, is built to meet the special requirements of physicians and dentists The building will cost $300 000 and is expected to be ready for occupancy April 1 1908

Personal—Dr Percy Sumner has resigned as resident physician of the California State Prison and Dr W M Thorn has been appointed to fill the vacancy Dr Sumner is going to take graduate work on the eye, ear, nose and throat in the East——Dr Charles B Pinkham has been appointed chief surgeon of the Western Pacific Railway, with headquarters at San Francisco——Dr Charles Freedman, Los Angeles, chief police surgeon at the Receiving Hospital, has resigned——Dr Chauncey Wilder, Oakland, formerly of Elgin, Ill, shot and killed a burglar who was trying to enter his house March 15——Dr A. A Stafford, San Francisco, is expected to return from New York early next month——Dr F M Pottenger, Monrovia, will leave for a four months' trip to Europe about April 1

Society Elections—At the annual meeting of the Solano Medical Society, held at Vallejo, March 14, the following officers were elected President, Dr C E Turner, vice president, Dr J W Huckins, secretary, Dr J J Hogan, and treasurer, Dr Fred T Bond.——The twenty third semi annual meeting and banquet of the San Joaquin Valley Medical Society was held at Hanford, March 12 Dr W T Barr was elected president, Dr Fowler, vice president, Dr D H Trowbridge, secretary, and Dr T M. Hayden, treasurer——The Central California Health Officers' Association, at its meeting in Hanford, March 11, elected Dr R W Musgrave, Hanford, president, Dr S W R Langdon, Stockton, vice president, Dr John R Butin, Madera, secretary, and Dr G L Long, Fresno, treasurer

COLORADO

Personal—Dr Francis B Rothrock, Colorado Springs, was run over after a breakdown of his buggy and was painfully injured——Dr and Mrs Horace G Wetherill, Denver, are taking a tour in Europe.——Dr Michael Bashoar, Trinidad, has been elected vice president of the American Tuberculosis League

Society Meetings—At the annual meeting of the Fremont County Medical Society, held in Florence, Dr Royal C Adkinson, Florence, was elected president, Dr Pitt A Wade, Canon City, vice president, Dr Raynor E Holmes, Canon City, secretary treasurer, and Dr Wilbur T Little, Canon City, delegate to the state association——The Teller County Medical Society, at its annual meeting held in Cripple Creek, elected the following officers President, Dr Will F Hassenplug, Cripple Creek vice-presidents, Drs Benjamin F Jones, Goldfield, Walter W King, Cripple Creek, and Albert C McClanahan, Victor, secretary, Dr Thomas A McIntyre, Cripple Creek, treasurer, Dr Alfred J Campbell, Victor, and delegate to the state association, Dr Albert C McClanahan, Victor

ILLINOIS

Health Bill Progresses—House bill No 468, amending the State Board of Health Act of 1877, passed the House of Representatives March 28 by a vote of 99 to 1 There has been no further change in the status of the other bills previously noted in THE JOURNAL.

State Board Orders Prosecution—Acting under directions from the secretary of the State Board of Health, the state's attorney at Peoria is reported to have instituted proceedings against C M Tharp, Kingston Mines, for practicing medicine without a license A judgment was, it is reported, found against Dr Tharp in 1902 for the same offense, and Dr Egan has instructed the state's attorney immediately to collect the penalty of $200 prescribed in this case

Chicago

In Aid of Hospitals—The concert at Orchestra Hall, April 1, netted $3,000 for St Mary of Nazareth Hospital——The Fresh Air Fund for the Jackson Park Sanitarium for Babies was increased by $2 000 as the result of a benefit performance, March 28, at the Garrick Theater

Cocain Seller Fined—Albert Dahlberg, against whom the police have been waging a crusade for selling cocain, pleaded guilty March 28, and was fined $150 and costs by Municipal Judge Newcomer He was also put on probation and ordered to report to the court every two weeks

A High Death Rate—The death rate in Chicago is unprecedented in the history of the health department During the week ended March 30, 744 deaths were reported equivalent to an annual death rate per 1,000 of 18 40 The death rate for the corresponding week of 1906 was 14 80 per 1,000 Pneumonia caused 172 deaths, consumption, 85, heart disease, 55, nephritis, 45 violence, including suicide, 40, cancer, 34 and acute intestinal diseases, 30

Communicable Diseases—During the week ended March 30, 169 new cases of scarlet fever were reported, with 16 deaths, 88 cases of diphtheria, with 8 deaths a decrease in new cases of 33 in the case of scarlet fever and 35 of diphtheria, as com

pared with the preceding week. An increase of 18 cases of measles was noted, 126 cases being reported for the week. No cases of smallpox have been found during the week, and the Isolation Hospital still contains 17 patients.

IOWA

Tuberculosis Hospital Site.—Two pieces of property west of the Iowa River, near Iowa City, have been deeded to the state as a site for the new tuberculosis hospital, to be built at a cost of $70,000. The actual building of the hospital is expected to begin during the summer.

Smallpox.—The prevalence of smallpox at State Center has necessitated the closing of churches and schools and the interdicting of public gatherings.——Four cases of smallpox are reported from Davenport.——The public schools of Anita have been closed on account of smallpox, three cases of the disease having been reported.——Clemons is reported to have two cases of smallpox.

College Officers and Faculty Elected.—Dr. Frederick E. Franchere was elected president of the board of trustees of the Sioux City College of Medicine at its annual meeting. Dr. R. H. Munger was elected vice president, Dr. Edwin D. Frear, secretary, Dr. Robert M. Gallen, professor of materia medica, Dr. Howard N. Brothers, professor of therapeutics, Dr. William Gillaume, professor of diseases of children, Dr. Frank S. Johnson, professor of diseases of the nervous system, and Dr. Frederick A. Franchere, professor of diseases of the eye, ear, nose and throat. Drs. William S. Tharp and Edwin D. Frear were elected members of the board of trustees, and Dr. John A. Dales was re-elected a member of the board.

Personal.—Dr. Charles E. Ruth, Keokuk, on the eve of his leaving for his new home in Colorado, was the guest of honor at a banquet March 15, given by his professional brethren of Burlington.——Dr. Ira D. Kauffman has been appointed health officer of State Center, vice Dr. Pliner W. Coe, resigned.——Dr. William O. Parish, Osceola, on the occasion of his sixty-eighth birthday, was presented with a Morris chair by the Clark County Medical Society, of which he is president.——Dr. Alden H. Wight, New Hampton, was stricken with cerebral hemorrhage, March 16.——Dr. Schroeder, Traer, has returned from Germany.——Dr. and Mrs. Isaac E. Nervig, Sioux City, were injured in an ice avalanche at Niagara Gorge, March 12.——Dr. Russell I. Hemphill, Plymouth, was thrown from his carriage in a runaway accident recently, suffering severe cuts and bruises.

KANSAS

Epidemic Diseases.—More than 60 cases of measles were reported in Fort Scott.——Measles is reported to be epidemic in Leavenworth.——More than 1,000 high school students of Topeka were recently exposed to smallpox and ordered vaccinated. Topeka has at present 9 smallpox patients in the Isolation Hospital.——During the first 18 days of March more than 100 cases of contagious diseases were reported and placed under quarantine at Topeka.——The health officer of Wichita reports 42 cases of smallpox in that city.——It is reported that there are more than 40 cases of smallpox in Hutchinson.

Hospital Notes.—Evergreen Hospital, a private sanitarium at Leavenworth, was destroyed by fire March 18, with a loss of $50,000. The inmates escaped uninjured. The Planters' House, Leavenworth, is to be used as a sanitarium until the management of the hospital secures permanent quarters.——The Commercial Club of Topeka has taken on itself the responsibility of securing a site for the proposed Sisters of Charity Hospital in that city. The sisters will build a hospital to cost between $25,000 and $50,000, on the condition that the city furnishes a site.——The governor has authorized an addition to the Post Hospital, Fort Riley, to cost $35,000. The hospital was built last year at a cost of $40,000.

KENTUCKY

Epidemic Diseases.—Sharpsburg and its vicinity are said to be suffering from an epidemic of influenza.——Measles is reported to be epidemic at Paducah.——On account of the prevalence of scarlet fever at Borden the public schools have been closed.

Academy Officers.—At the annual meeting of the Louisville Academy of Medicine Dr. J. Rowan Morrison was elected president, Dr. Hugh R. C. Manning vice president, Dr. Oscar F. Bloch secretary, and Dr. Cavin Fulton, treasurer. Dr. Daniel M. Griffith, Owensboro, president of the state medical society, was the guest of honor.

Tuberculosis Clinic.—The Kentucky Anti-Tuberculosis Association has decided to purchase 53 acres between Taylor Boulevard and the Eighteenth Street road, Louisville, for $13,300, on which a hospital will be erected. The association has arranged to hold two clinics a week at the City Hospital and to furnish a visiting nurse free to the poor, the city to provide quarters and medicine.

Incorporated Milk Commission Inadvisable.—At the last meeting of the Jefferson County Medical Society the milk commission deemed it not advisable to incorporate the commission, as had been suggested at the last meeting, as the state pure food authorities had in charge all legal matters which might arise. The commission reported that of three supplies of certified milk all had a bacterial count of less than 5,000 and one of these a count of only 1,000, the standard being 10,000 per c.c.

Personal.—Dr. and Mrs. Joseph M. Mathews, Louisville, have returned after three months in Florida.——Dr. William A. Keller, city physician for the west end, Louisville, is reported to be critically ill.——Dr. William T. Willis, Mount Sterling, recently pushed his right arm through a glass window, cutting an artery and nearly bleeding to death.——Dr. Joseph W. Hill, formerly of Bardstown and for the last four years superintendent of the Kentucky Institute for the Education and Training of the Feeble-Minded Children, Frankfort, has resigned to enter private practice and will probably settle at Versailles.

Eradication of Bovine Tuberculosis.—A special meeting of the Kentucky Veterinary Association was held at the Galt House, Louisville, March 28, in the interest of a measure to be introduced in the next legislature for the eradication of tuberculosis among dairy cattle. During the discussion two of the local veterinarians made the statement that the inspection of dairies as now practiced by them is a farce, that it is easy to make money by driving to a fence along side a dairy, asking the number of cows in the herd, writing a certificate that they are healthy and receiving 50 cents a head therefor. It was stated that 25 to 35 per cent. of the cattle supplying milk to Louisville are tubercular, and a still larger percentage around Covington.

Faculty Officers of Merged Colleges Elected.—At a meeting of the combined medical faculties of the University of Louisville and Kentucky University, to be known in the future as the Faculty of the University of Louisville Medical Department, held March 27 in Louisville, the following officers were elected: President, Dr. James M. Bodine; dean, Dr. Thomas C. Evans; and secretary, Dr. Richard B. Gilbert. Dr. Bodine in accepting the office stated that with the present session he was rounding out his fortieth year as dean of the university and that it was with regret he relinquished it for the more responsible position of president of the faculty. An advisory committee was appointed, composed of the chancellor, Drs. John C. Willis, Joseph B. Marvin, Thomas L. Butler, Adolph O. Pfingst and John G. Cecil. This committee, with the faculty, will have in charge the details of the college work.

MARYLAND

Fight Against Consumption.—Nearly $8,000 of the $10,000 fund required for the work of the Maryland Association for the Prevention and Relief of Tuberculosis has been subscribed. A branch of the society has been organized at Hagerstown, with Dr. James W. Humrichouse as vice president and Dr. Christian R. Scheller as treasurer.

Personal.—At a meeting of the Society of Colonial Wars, held March 28, the anniversary of the settlement of Maryland, Dr. Bennett B. Browne was elected librarian, and Dr. H. Barton Jacobs, surgeon.——Dr. Brice W. Coldsborough, Cambridge, is ill at Johns Hopkins Hospital, Baltimore.——Dr. Charles G. W. MacGill is ill at his home in Catonsville.

Bequests.—By a decision of the Circuit Court, March 18, the Union Protestant Infirmary, Baltimore, received a legacy of $[illegible],000 devised to it in 1901, with interest from that date.——The late Martin Kelly, Baltimore, after some small bequests, devises one-half the residue of his estate to St. Agnes' Sanitarium.——Moses Pels, a wealthy shoe dealer of Baltimore, has empowered his executors to make certain charitable bequests, no stipulation as to the amount or the institution being made.

Insanity on the Increase.—According to the twenty-first annual report of the lunacy commission, prepared by the secretary, Dr. George J. Preston, Baltimore, insanity is on the increase in Maryland. Additional accommodation must be provided for the indigent insane, and the coming legislature will be called on for an increased appropriation to this [illegible]. [illegible] causes of insanity named in the report [illegible] coming next. Employment is considered [illegible] the chronic insane, when the [illegible] permit its use.

MASSACHUSETTS

Mueller in Boston—Dr Friedrich Mueller, Munich, spoke March 27 before the Boston Medical Society on "Social Legislation in Germany and Its Influence in the Care of the Sick"

Alumni Association Meets—The Western Massachusetts Alumni Association of the Medical Department of the University of Vermont, Burlington, held its third annual banquet at Springfield, March 21 The guest of honor was Dr Henry C Tinkham, Burlington, dean of the medical school, and Dr Charles J Downey, Springfield, officiated as toastmaster The following officers were elected President, Dr Charles J Downey, Springfield, vice president, Dr James M Fay, Northampton, and secretary treasurer, Dr Mortimer J Stoddard, Springfield

Epidemic Diseases—The White Star Liner *Cymric* was held at quarantine, March 25, on account of a case of smallpox on board The thousand steerage passengers were vaccinated before the steamer was released——Because of the number of cases of scarlet fever in Boston, the Board of Health has asked an increase in its appropriation from $210,000 to $240,000——At the annual town meeting of Brookline, $238,178 was appropriated for the public safety and health account——A sophomore at Harvard is reported to have died at the college hospital, March 20, from spinal meningitis——Fourteen cases of variola were reported in Lawrence, March 24, and seven more developed during last week The disease is in mild form, and the patients have all been removed to the Isolation Hospital

NEW YORK.

More Typhoid at Katonah—Three new cases of typhoid fever have been reported at the village of Katonah Dr Darlington has gone over the entire territory and found everything in a hygienic way apparently as it should be, and contamination of the city water supply seems impossible

Sanitarium Gabriels—This institution, which is located in the Adirondacks and cares for those in the first stages of tuberculosis, is seriously handicapped by lack of funds and asks $65,000, of which $8 461 must be raised before May 24 About $135,000 has already been spent on buildings and equipments

New State Hospital—The State Lunacy Commission wants the state to buy a site for the building of a hospital on the cottage plan and has drafted a bill for passage by the legislature providing for this The state's lease of Ward's Island expires in five years, therefore, future disposition of the many patients there now necessarily occupies the commission's attention

New York City

Personal—Dr Mary Crawford has been appointed to the surgical staff of the Williamsburg Hospital——Dr and Mrs John J Nutt sailed on the *Pennsylvania* for Hamburg, March 30

Tablet to Dr Fowler—The Society of Ex Internes of Seney Hospital Brooklyn will unveil a bronze tablet to the memory of Dr George Ryerson Fowler The tablet will be placed in the main hall of the hospital

Pneumonia on the Increase—According to the winter report of the Board of Health during the period from Dec 8, 1906 to March 9 the deaths from pneumonia in Greater New York were 4,105, while those from tuberculosis numbered only 2,496

Talk on Charity—Attorney General Bonaparte delivered a lecture at Carnegie Hall from which the Society of St. Vincent de Paul realized $2 000, which will be devoted to its charitable works in this city and its fresh air farm at Spring Valley

Appeal for Samaritan Hospital—A movement is on foot to raise $200,000 for the erection and equipment of Samaritan Hospital This hospital is the outgrowth of a dispensary established six years ago because of the rapid growth of the section in which it is located The hospital was incorporated in 1904

Milk Hearing Ends—The last public hearing before the committee of aldermen, on the subject of pasteurization of the city milk supply, was held March 29 In view of the stand taken by the Board of Health and endorsed by the Academy of Medicine, the scheme for wholesale pasteurization was given up though the crusade for better conditions in the dairies will be prosecuted with diligence

Glasses for School Children—At the last meeting of the Board of Education there was a spirited discussion over the question of furnishing glasses for school children with defective vision It was stated that 36,000 children in the schools are suffering from defective vision, and that the majority of the parents of these children are unable to furnish them with glasses A resolution was appended to this report asking for $30,000 to fit up rooms for testing eyes and for the provision of glasses, etc The resolution was laid over until the next meeting

Better Hospital for Immigrants—The plans for the improvement of the immigrant station at Ellis Island and for the completion of the huge contagious diseases hospital which is being built on a small artificial island adjoining Ellis Island, will be completed by July 1, when the appropriation will be available, and the work will be rapidly pushed to completion The recent Congress appropriated $850,000 to be expended on these improvements Of this sum $400,000 is for remodeling the main building, and $250,000 was added to a former appropriation for the hospital

City Hospitals Full—The Commissioner of the Charities Department has presented a report to the State Board of Charities telling of the overcrowded condition of the various hospitals and institutions under his care During the coming month he will act on bids for the construction of city buildings to cost $2,000,000 The Sea View Hospital for tuberculosis patients on Staten Island had been halted by an injunction obtained by real estate dealers and owners who claim that the institution is for contagious disease and should be under the management of the Health Department. The city has over 10,000 helpless persons to care for and, owing to the growth of population and the influx of immigrants, is confronted with a difficult problem Even at present all the institutions for the care of this class are overcrowded and the improvements now under way should have been completed years ago

Contagious Diseases—There were reported to the sanitary bureau for the week ended March 16, 435 cases of tuberculosis, with 209 deaths, 429 cases of measles, with 13 deaths, 365 cases of scarlet fever, with 25 deaths, 256 cases of diphtheria, with 37 deaths, 55 cases of typhoid fever, with 4 deaths, 45 cases of whooping cough, with 9 deaths, 21 cases of cerebrospinal meningitis, with 16 deaths, and 106 cases of varicella, a total of 1,712 cases and 313 deaths There were reported to the sanitary bureau for the week ended March 23, 410 cases of tuberculosis, with 169 deaths, 44 cases of measles, with 13 deaths, 375 cases of scarlet fever, with 19 deaths, 318 cases of diphtheria, with 34 deaths, 101 cases of typhoid fever, with 17 deaths, 61 cases of whooping cough, with 12 deaths, 21 cases of cerebrospinal meningitis with 18 deaths, 99 cases of varicella and 3 cases of smallpox, a total of 1,832 cases and 282 deaths

PENNSYLVANIA.

Diphtheria Epidemic.—Diphtheria has become so prevalent at Intercourse, near Lancaster, that the school board has closed the public schools and will not have them reopened this spring

Must be State or Private Hospitals—Governor Stuart has vetoed a bill for mixing state and private management of hospitals, a practice well established in the state There are hospitals that will not accept state aid, but there are others that accept it under the present system, but would refuse it rather than submit to partial state control The bill directed the governor to appoint two directors or trustees of all institutions, hospitals, etc, which receive state aid for maintenance or other purposes The state would not obtain control of the institutions, but only the means of interfering with private control

Care of Insane Inadequate—The commission appointed by the last General Assembly to investigate the management of Pennsylvania institutions for the insane, submitted its report to the governor March 24 The commission finds that the housing or custodial care of the insane in the institutions supported by the state is totally inadequate and inefficient, because of the age and crowded condition of the buildings, that those responsible for the treatment and care of nearly 15,000 inmates of these institutions have not kept apace with the highest medical skill and science, that the laws and decisions fixing the responsibility of relatives and others for the support of the inmates have not been enforced, in consequence of which the counties have not been reimbursed in many thousands of cases and the state has not been reimbursed for money amounting to hundreds of thousands of dollars paid for the maintenance of such inmates, which should have been repaid by the estates of inmates or relatives responsible under the law

Health Officers for Rural Districts Advocated—The cities and boroughs throughout the state are strongly advocating Health Commissioner Dixon's appointment of health officers

for the unprotected rural districts There are about 2,500,000 people in the state who live in districts where there are no local boards of health The 700 health officers appointed by Dr Dixon for the rural districts will see that the regulations of the State Department of Health for the control of communicable disease are obeyed The enforcement of such regulations in the case of scarlet fever and diphtheria, for instance, will be particularly beneficial Not only will every case like this be placarded by the health officer, but on the termination of the case he will disinfect the premises properly Following the placarding of such contagious diseases as require the exclusion from school of the children in the household, the township health officer will serve a written notice on the school in regard to such exclusion He will also notify the libraries in the district, so that books may not be granted to those residing in infected houses

Personal—Dr Herman A Brav, Philadelphia, has been elected surgeon in charge of the department of rectal diseases in the American Hospital for Diseases of the Stomach——Dr B Harry Warren, West Chester, has resigned as dairy and food commissioner of Pennsylvania The salary of the office is $2,500 a year——Dr Charles H. Saul, Steelton, who has been seriously ill for several weeks, is convalescent—Dr William E Kunkle, Williamsport, is reported to be seriously ill at his home——Dr James S Koontz, Johnstown, who has been ill for several weeks has recovered——Dr Alfred J Yost and family, Allentown have returned from Denver——Dr Isaiah F Everhart, Scranton, was recently stricken with cerebral hemorrhage, and is reported to be critically ill——Dr Austin M Grove, York, has been appointed coroner of York County, to fill the unexpired term of Dr Herbert F Gross——Dr Sidney Davis, Milton, was thrown from his buggy in a runaway accident recently and severely cut and bruised——Dr Franklin F Arndt, Scranton, has resigned as city bacteriologist, and Dr Jonathan M Wainwright has been appointed his successor——Dr Jesse G Kistler, Germansville who was recently injured about the head in a runaway accident, is reported to be critically ill with erysipelas

Philadelphia

Protest Against Veterinary Hospital.—Dr Henry W Cattell writes that there was an error in an item in THE JOURNAL, March 30 He states that the act entitled "An act for the protection of the public health, prohibiting hereafter the establishment or maintenance of additional hospitals, pest houses and burial grounds in the built up portions of cities," and reading "that for the purpose of protecting the public health, it shall be unlawful hereafter to establish or maintain any additional hospital, pest house or burial ground in the built up portions, provided, however, that nothing herein contained shall be construed as to prevent the maintenance of any hospital, pest house or burial ground now lawfully established and maintained in such portions of the cities," which was approved by Governor Stone, April 20, 1899 was repealed four years ago, ostensibly for the purpose of permitting the Phipps Institute to establish its hospital for consumptives, but really with the object of allowing the University of Pennsylvania to erect its Veterinary Hospital at Thirty ninth and Woodland Avenue Dr Cattell condemns the health authorities of Philadelphia for the erection of the hospital, at which the most loathsome contagious diseases of the lower animals transmissible to man, are to be treated

Hospital for Insane Open.—Improvements begun under contract last November involving the expenditure of $126 000 having been completed, the Philadelphia Hospital and addition for the insane was opened to the public March 27 As the male indigent were removed in September, 1906, to quarters in the Philadelphia Museums, the building formerly occupied by that class of inmates has been renovated and its new inmates were installed March 28 This renovation includes renewal of practically all floors, the cleaning and painting of walls the displacement of all antiquated plumbing and the installation of the most modern appliances, the equipment of wards with new furniture, medicine closets rolling chairs stretchers and new linen Other equally important improvements are the provision of new quarters in the old attic for 75 orderlies and attendants new steam heating appliances with guards for protecting the sick and insane metal screens for windows and doors, fire escapes with additional stairways all of which on the insane side, are properly enclosed and a new tunnel through which the insane may go to and from meals in inclement weather without exposure It is hoped that the fresh air treatment for tuberculosis will soon be adopted on a large scale at the hospitals At present there are 286 tubercular patients, 223 males and 63 females

TEXAS

Change in Hospital Plan.—The new hospital building to be erected at Temple for the use and benefit of the employes of the Santa Fe system at a cost of $100 000, is to be made fireproof, at an additional outlay of $20,000

Epidemic Diseases—Several well developed cases of smallpox with one death are reported from Courtney——Vaccination of all children in the public schools of Dallas was ordered March 8 Two physicians have been appointed for each ward school and the work is to be completed in one day——The white and colored schools at Stafford and the colored school at Hockley have been closed on account of the prevalence of smallpox

UTAH

Personal.—Dr William R Tyndale, Salt Lake City, has been appointed assistant surgeon in the National Guard of Utah, vice Dr Hiram A Anderson, Salt Lake City, resigned——Dr William R Calderwood, Salt Lake City, has been appointed county physician.——Dr Alfred J Ridges, Salt Lake City, has been appointed assistant in anatomy at the Johns Hopkins Medical School, Baltimore

Medical Board Named.—The governor has made the following nominations for members of the State Board of Medical Examiners Drs David C Budge, Logan Cache County, Amasa S Condon, Ogden, Weber County, Charles L Olsen, Murray, Alexander C Ewing, Salt Lake City, Elias S Wright, Salt Lake City, Frederick E Straup, Bingham Canyon, Robert W Fisher Salt Lake City, Ralph Richards, Salt Lake City, and A P Hibbs, Weber County

Epidemic Diseases—Several cases of diphtheria have recently developed in Ogden——The county quarantine physician, Dr Ferguson, Castledale states that the cases of smallpox at Orangeville, Ferron and Clawson have recovered and the county is now free from the disease——It is reported that there have been 24 deaths from cerebrospinal meningitis since January 1——The inspector of the state board of health reports 14 cases of typhoid at Segirt, Sevier County

Work of the Legislature.—The State Board of Health rejoices over the fact that its work in the legislature has been successful and that its attempts to raise the hygienic and sanitary standards of the state have been appreciated The following bills have been passed A bill compelling manufacturers of nostrums to show on a label whether alcohol or narcotics form a part of the formula, a bill providing for the instruction of children in public and normal schools in the prevention of disease and the causes of disease, a new pure food law, similar to the national pure food law, a bill to prevent expectoration in public places and street cars and requiring cuspidors to be placed in the day coaches on railroad trains, the marriage restriction bill was also passed

VIRGINIA

Medicine Samples Barred.—Health Commissioner Henry R Dupuy, Norfolk has refused to issue a permit for the distribution of samples of nostrums in the city

Correction in List of Officers.—In the election of officers of the Richmond Academy of Medicine and Surgery published in THE JOURNAL, March 16 page 9 7 the name of the third vice president should have been Dr Creer Baughman and that of the treasurer Dr William A Shepherd

Dispensary Report—During 1906 the dispensary of the Medical College of Virginia, Richmond treated 6 017 patients 1 358 of whom were white and 4 659 colored The surgical cases numbered 1 253 those of children s diseases 185, and 9,277 prescriptions were compounded at the dispensary

Personal—Dr Oliver C Brunk has assumed charge of the Eastern State Hospital for the Insane Williamsburg The successor to Dr John M Henderson will be chosen at the April meeting of the board——Dr John W Williams Richmond who has been seriously ill with influenza is convalescent——Dr Trueman A Parker Richmond has been appointed surgeon of the Seventieth Virginia Infantry with the rank of major

Jamestown Exposition.—Dr Moses Benmosche Norfolk is in charge of the medical exhibit at the Jamestown Exposition A demonstration of the methods for the prevention and cure of tuberculosis will occupy 5 000 square feet of space Dr Benmosche expects to go to Europe in the interest of the exhibit——Major Charles A Woodruff surgeon U S Army has been appointed chief surgeon and chief sanitary officer of the camp of the United States troops and militia to [illegible] the Jamestown Tercentennial Exposition [illegible] at Norfolk

WASHINGTON

Personal—Dr B F Roller, Seattle, has been dangerously ill with septicemia——Dr Sarah J Dean, Seattle, was thrown from her carriage in a collision with a street car recently, and severely bruised

Epidemic Diseases.—At Quilcene 52 cases of trachoma are reported, and the public schools of the place have been closed and thoroughly fumigated——Spinal meningitis is reported to have broken out in the Puget Sound Navy Yard, Bremerton, and on the training ship *Philadelphia* at that place The yard is under quarantine——At Toppenish 5 cases of small pox are reported and 17 individuals are under quarantine

WISCONSIN

Epidemic Diseases—Viroqua reports 20 cases of smallpox——Eau Claire has four cases of smallpox of a mild type——Dr Gerhard A Bading, health officer of Milwaukee, recently went to Campbellsport to investigate 13 cases supposed to be smallpox——Several schools in Outagamie County have been closed on account of an epidemic of measles——Typhoid fever is reported to be prevalent in Manitowoc.

Society Meetings.—At the annual election of the Barron Polk Rusk County Medical Society held at Rice Lake, the following officers were elected President, Dr William B Hopkins, Cumberland, vice presidents—for Barron County, Dr Grant F Tanner, Turtle Lake, for Polk County, Dr Abraham L Wells, Clear Lake, for Rusk County, Dr Lambert M Lundmark, Ladysmith, and secretary, Dr Olaf M Sattre, Rice Lake——At a meeting of the Outagamie County Medical Society, held at Appleton, Dr William N Nolan, Kaukauna, was elected president, Dr Henry W Abraham, Appleton, vice president, Dr Manly J Sandborn, Appleton, secretary treasurer, Dr William A Shepherd, Seymour, delegate to the state society, and Dr William E Zilisch, Hortonville, alternate

GENERAL

Measles on Battleship—It is reported that measles is epidemic on the battleship *Georgia*, and that more than 50 men from that ship have been transferred to the naval hospital, Portsmouth, Va

Medical Congress—The second National Medical Congress of Mexico will be held in Mexico City, May 28 31, under the auspices of the Medical Society Pedro Escebodo The governors of the various state will send delegates to this congress, the work of which will be divided into eleven sections

Epidemics.—It is reported that an epidemic exists at Reynosca, Mexico, from which 100 deaths have resulted The governor of the State of Tamaulipas, however, denies that an epidemic exists——The milk supply of Havana and surrounding towns is said to be the cause of a reported epidemic of typhoid fever

Personal—Passed Assistant Surgeon W W King of the ublic Health and Marine Hospital Service has returned to he Bitter Root Valley of Montana to continue his studies of Rocky Mountain spotted fever——Dr John N Thomas, who has been in charge of the Mississippi River Quarantine Station a number of years, is reported to have been offered the position of medical inspector of Central American fruit ports during the quarantine season——Surgeon General Robert M O'Reilly is one of the American delegates to the International Red Cross Congress, which will open in London June 10

Accident Insurance Examiners Organize—About 30 physicians and surgeons, connected with the examination work of accident insurance companies and claim departments met in Boston March 22, to discuss the plans for the formation of an organization A committee was appointed to draw up a constitution and by laws, to report at the next meeting, to be held April 8 The meeting was called at the instance of Dr Frank E. Allard who stated that the object of the association is to protect the public and companies from frauds The committee appointed includes Dr Frank E Allard, chairman and Drs Edward M Greene, Francis D Donoghue, Harry H Hartung, Charles T Cutting and Charles O Kepler, all of Boston

Vienna Anglo American Medical Association—This organization was founded Feb 4 1906 and is similar to the Anglo American Medical Association of Berlin which was described in THE JOURNAL, Jan 5 1907 page 65 The society met at first twice a month but meetings are now held every Friday evening addresses are given by prominent physicians All physicians of good standing irrespective of nationality, engaged in graduate work are eligible to membership The purposes of the society are to promote the social intercourse of its members to furnish information for the early and rapid orientation of new members in regard to board and lodging restaurants and the scope and relative value of courses, and furthermore, to promote the scientific advancement of its members The membership of the association averages from 80 to 100 the entire year The control of the personnel of certain popular courses has been placed in the hands of the association in order to enable the society to place the rights of priority to enter these courses on the fairest possible basis, namely, the length of time the applicants for admission have been in Vienna For this privilege the association assumes, in a measure, the responsibility for keeping the courses full and for conducting them to the advantage also of the men who give them A study of the register of the association shows an increase in the number of American physicians studying in Vienna During 1904 210 physicians attended the various special courses and clinics, in 1905, 218, and in 1906, 295 In January and February of this year 55 men registered from various parts of the United States, as follows New York, 9, Ohio, 7, California, 8, Pennsylvania, 6, Illinois, 6, Washington, 2, Nebraska, 1, Oregon, 2, Texas, 1, Connecticut, 2, Iowa, 1, Tennessee, 1, Montana, 1, Michigan, 2, Maryland, 1, Kentucky, 2, Virginia, 1, New Hampshire, 1, Massachusetts, 1

CANADA.

University News.—The chair of medicine and clinical medicine in McGill University, Montreal, which was left vacant by the recent death of Dr James Stewart, has been filled by the appointment of Dr Frederick G Finley for the didactic work and of Dr Henri A. Lafluer and Charles F Martin to have joint charge of the clinical work

Medical Inspection Stopped—The medical inspection of schools in Montreal has been stopped for the present, owing to lack of sufficient funds to pay the 40 medical inspectors Since the inspection began, six months ago, there is said to have been 70 per cent less disease and uncleanliness in the schools of Montreal than formerly

Militia Medical Officers Appointed.—The following senior medical officers have recently been appointed in the Canadian militia Eastern Ontario, Drs William A Willoughby, Colborne, Richard W Garrett, Kingston, and J A McCammon, Quebec command, Drs Henri Trudel, St. Gregorie, J P Lord, Joseph E Grondin, Charlesbourg, Ernest R. Brown, Montreal, and P Ostigny

Ministry of Health.—Dr Domingo Orvananos, Mexico City, president of the American Public Health Association, has appointed the following as a special committee to further the establishment of a ministry of health in Canada Dr Robert M Simpson, chairman of the Winnipeg Board of Health, Dr P H Bryce, chief medical officer of the Department of the Interior, Ottawa, and Dr F Montizambert, director general of public health for Canada

Hospital News—An addition is to be erected to the Stratford (Ont) General Hospital at a cost of $20 000 It will provide for children's wards, maternity wards and operating room——Nurses' homes are to be erected in connection with the Western Hospital, Montreal, and the Royal Victoria Jubilee Hospital, Victoria, B C—The Toronto Provincial Hospital for the Insane, following the appointment of a resident pathologist has commenced the publication of a regular monthly bulletin on psychiatry This marks a distinct advance in the study of psychiatry in Ontario The first volume is largely devoted to methods of examination and to paranoia——The thirty fifth annual report of the British Columbia Provincial Hospital for the Insane shows that 150 patients were admitted to that institution during 1906, being 27 more than the previous year Of this number 108 were males and 42 females During the year 79 patients were discharged, the largest number in a single year

FOREIGN

Flowers and Plants for Berlin Hospitals—A flower show was held at Berlin in March to raise funds to keep the public hospitals constantly supplied with cut flowers and plants

Metric System Rejected by Great Britain.—The British Parliament has rejected, by a vote of 150 to 118, a proposal to make the metric system standard in the United Kingdom

German Medical School Founded in China—Shanghai is to have a German medical school and Claude du Bois Reymond of Berlin has been appointed professor He is the son of the famous physiologist and has devoted himself mostly to ophthalmology

Recipients of Salomonsohn Prize—From the endowment for promotion of scientific research known as the Salomonsohn foundation sums have been given recently to Madam Rabino

witsch Kempner of Berlin, Rosenfeld of Breslau and Zoeppritz of Göttingen, about $500 being divided between them

Free Tuberculosis Dispensary in Constantinople—An anti tuberculosis league in Constantinople will open a free dispensary where people, irrespective of creed and nationality, may receive treatment for tuberculosis or any other disease of the respiratory organs It will be conducted as are similar institutions in western Europe

Typhoid Fever in Turkey—The *Lancet* states that there is much typhoid fever in several suburbs of Constantinople In Haskeuy, on the left bank of the Golden Horn, more than 90 cases have been reported in a comparatively short space of time. The sanitary authorities are alarmed and the prefect of the city has ordered that all the drains and fountains should be examined and necessary repairs made

Transactions of the International Cancer Conference—A special number of the *Zeitschrift f Krebforschung* is devoted to the transactions of the international conference of workers in cancer research which was held at Heidelberg last September The journal in question is issued by D v Hansemann and G Meyer as the official organ of the German cancer research committee, which has its central office in Berlin, Bendlerstrasse 13

Extensive Bovine Vaccination in Argentina.—P Römer of Marburg leaves at once for Buenos Ayres to apply von Behring's method of vaccination of cattle against tuberculosis on an extensive scale on request of the Argentine government Römer has been at the head of one department of von Behring's Institute for Hygiene and Experimental Therapy, and the German government conferred the honorary title of professor on him as he left for South America

Ernst Haeckel's Fiftieth Professional Anniversary—On the occasion of the fiftieth anniversary of his graduation in medicine, Prof Ernst Haeckel of Jena was made a privy medical councilor with the title of *Excellenz* He practiced medicine for a time in Berlin, but then turned his attention entirely to the natural sciences and made his name famous with his researches and publications on comparative embryology, anatomy and physiology He is now in his seventy third year and said to be in the best of health

Resignation of Hospital Medical Staff at Cracow—A Vienna exchange states that the physicians connected with the public hospital at Cracow recently petitioned the authorities for increased remuneration Their request was denied and they have unanimously decided to resign their positions on April 1, their resignations to take effect in two weeks Steps are being taken to insure that their action will be sustained by physicians generally throughout Austrian Poland, so that no physician will accept a position in the hospital under present conditions

Recipients of Tiedemann Prize—This prize is awarded every fourth year by the Senckenberg Society at Frankfurt a M to the German writer who has produced the best work along the lines of comparative anatomy and physiology It was awarded this year to E. Buchner of Berlin for his research which has demonstrated that the process of fermentation is not due to the action of living organisms, but is a physical contact action The previous recipients of the prize have been Koch Ehrlich, Bütschli, E Fischer, von Behring A Kossel and F Schaudinn

A New Maternity for Constantinople—The Italian Hospital of Constantinople, according to the *Lancet*, has opened a maternity section for the poorer classes of the population under the charge of Dr Stavridis Three days a week there are free consultations If a woman desires to enter the hospital she must write her name in the register kept at the hospital for that purpose and occupy the bed assigned to her If a woman desires to be delivered in her own home she will be furnished information and assistance The rooms in the maternity are equipped with every modern appliance, and the institution should prove a boon to indigent mothers

Death of Berthelot, Founder of Organic Synthesis.—The death is reported from Paris of another great chemist Prof M P E Berthelot at the age of 80, to whom is ascribed the honor of laying the foundations for organic synthesis and for thermo chemistry Besides his important pioneer work in these lines he published many articles on other phases of chemical research fully 600 works issuing from his pen The list includes a number of historical treatises on chemistry and alchemy the results of study of papyri and of Greek Arabian and Syrian records He took an active part in public life serving as minister of foreign affairs and as senator and his long life was crowned with honors although he never sought to make a pecuniary profit out of any of his important scientific discoveries from which others are still reaping such harvests

Blackwater Fever in Bengal and Assam.—Blackwater fever is reported to be more virulent than ever in Jalpaiguri and the tea planters have appealed to the lieutenant governor of Eastern Bengal and Assam for help During 1906, 13 young Europeans out of a population of 200 died from this disease, and the survivors are beginning to ask themselves if the worldly prospects are such as to justify them in running so serious a risk to life by remaining there According to the *British Medical Journal*, the mortality is not confined to Europeans, that of the coolies and of all whose work lies in the Duars is appalling, and it is hoped that the government will appoint a commission to investigate the matter In spite of all that has been done on the subject, it is felt that the knowledge of blackwater fever is in an unsatisfactory condition and it appears that in Jalpaiguri the conditions for studying the subject are favorable There are physicians on the spot who have intimate knowledge of the clinical features of the disease and of the local conditions and who will gladly place these valuable assets at the disposal of any commission which the government may appoint The planters have promised a considerable sum toward the expense of an investigation, and as the existence of an important industry is at stake the government can hardly fail to help in the matter

Congresses in Europe This Year—The International Congress for Psychiatry, Neurology, Psychology and the Care of the Insane will be held at Amsterdam, September 2 to 7——It will be followed a week later by the first congress of German neurologists, which meets at Dresden At the latter the main addresses are to be on various phases of the surgical treatment of nervous affections, delivered by Krause Bruns Neisser and Müller——The congress of French speaking neurologists and alienists is to be held in Switzerland in August, Prevost of Geneva to preside Professor Berdez of Lausanne is the secretary The subjects to be discussed are hysteria periodical neuroses, medicolegal testimony and responsibility——The Seventy ninth Congress of German Physicians and Scientists—the *Naturforscher* congress—opens at Dresden September 15 and closes the day before the congress of hygiene at Berlin——The Second International Physiotherapy Congress will convene at Rome in October The Italian congresses also meet in October as a rule, and the French surgical congress at Paris——The Seventh International Physiology Congress will meet at Heidelberg August 13 16, and the International Anti tuberculosis Conference at Vienna September 19 21 followed October 2 5 by the first annual congress of German speaking urologists——The Twelfth German Gynecologic Congess will be held at Dresden May 21 25 Leopold will preside, Weindler of Dresden is the secretary The principal subjects are pelvis enlarging operations, and asepsis in gynecologic operations——Elaborate preparations have been made for the Fourteenth International Congress of Hygiene and Demography at Berlin, September 23 27 The chief of the imperial board of health, Professor Bumm will preside Further particulars can be obtained from the secretary Dr Nietner, Eichhornstrasse 9 Berlin W 9

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 16, 1907

A Central Emergency Fund for Maintaining the Interests of the Profession

As the British Medical Association is constituted as a "limited liability company" not formed for profit no part of its funds can legally be used for the benefit of any individual member except by way of remuneration for services rendered to the association This has prevented the giving of financial assistance to its members engaged in disputes with organized bodies in the matter of contract practice The council therefore has instituted for this purpose the central emergency fund, which is maintained by voluntary subscriptions All members of the profession are invited to contribute Any contribution may be marked for use in specified disputes or for application to special methods of carrying out the objects of the fund The fund will be under the control of the medico political committee of the association

Lord Lister's Eightieth Birthday

Lord Lister's eightieth birthday falls on April 5 1907 A movement has been started to convey to him the admiration which is felt for his work Dr C J Martin director of the Lister Institute has suggested that the best [illegible] expression could take would be the publication [illegible] tific papers prefaced by a [illegible] his discovery of the antiseptic [illegible]

London Ambulance Commission

The first meeting of the London Ambulance Commission was held February 14 An experimental motor car, at a cost of $2,500, has been made and a station will probably be built near St Bartholomew's Hospital This ambulance is equipped with every latest portable appliance for surgery, together with a full stock of medicines, lotions and bandages A surgeon will accompany the ambulance It seems strange that the largest and richest city of the world should have only just awakened to the fact that her ambulance arrangements are many years behind the times Hand ambulances and stretchers are still in vogue in London, but a beginning has been made, and this state of affairs will soon be changed

LONDON, March 22, 1907

The Royal Commission on Tuberculosis

An important report on the histologic and bacteriologic investigations carried on by Dr Eastwood in connection with the Royal Commission on Tuberculosis has just been issued It emphasizes the findings previously referred to in THE JOURNAL—that bovine tuberculosis is transferable to man But Dr Eastwood adds the interesting statement that "The evidence before him confirms the view that some viruses of human origin are relatively innocuous to bovines" Bacilli of bovine origin produce in bovines lesions of a highly acute type Some virsues of human origin produced similar results, while others produced only a mild type of disease In the anthropoid ape the human viruses, which were relatively innocuous to bovines, produced typical tuberculous lesions similar to those produced by bovine bacilli Even in small doses bovine bacilli produced typical tuberculosis Dr Eastwood concludes that his investigations have failed to give the slightest indication that there is any peculiarity about bovine viruses which might suggest that compared with other viruses they are relatively innocuous to man

Death of a Surgeon from an Accident During an Operation

While operating for appendicitis, Dr Lowson of Hull pricked his finger in November, 1906 For several weeks he lay seriously ill with septic cellulitis After a few weeks' vacation he returned to work, but in impaired health Toward the end of January he was taken ill with pleurisy, which terminated in empyema He came to London, where his chest was opened and drained, but his reserve strength was reduced so low that he lingered for a few weeks and died March 15, at the age of 56 Many years ago he also suffered in the discharge of his duty He contracted diphtheria from sucking a blocked tracheotomy tube and saved the patient's life, for which he was awarded the Albert medal The result of that accident was to render him unfit for work for a year His reputation as an operator was considerable He appears to have been the first to perform the operation of pneumonectomy In cases of early phthisis he removed the affected portion of lung with success.

The Society of Tropical Medicine and Hygiene

A society of this name has been founded The determination to found it was formed two months ago at a meeting held at the Colonial Office on the suggestion of Mr James Cantlie Sir Patrick Manson presided, and a subcommittee was formed to make the necessary arrangements, consisting of the chairman, Col Melville, Dr Sandwith Dr Carnegie Brown, Prof Ronald Ross Dr G C Low and Mr Cantlie To these were added the following in order to constitute a general committee Professor Nuttall (Cambridge) Dr W Hartigan, Lieutenant Colonel Giles Dr Sambon The promoters hope that the society will become universal, and embrace every man and woman interested in tropical medicine Nine-tenths of the members will probably live abroad, and the object will be to provide mutual instruction and support for all

The Epidemic of Cerebrospinal Fever

Cases of cerebrospinal fever continue to be reported from London and various parts of the country, but epidemic prevalence is still confined to Glasgow and Belfast In Glasgow on March 15 112 cases were under observation, as compared with 101 on March 8 On March 19 the health officers issued a statement that during the past two weeks there had been 93 cases and 55 deaths, as compared with 90 cases and 60 deaths in the preceding fortnight During February, 140 deaths occurred in the eight principal towns of Scotland, being 66 more than in January In Belfast 185 cases have been reported up to the present and 104 deaths In Dublin 15 cases and 11 deaths have occurred, but no new case has been reported since March 6

The Eighth International Conference of Red Cross Societies

The Eighth International Conference of Red Cross Societies will be held in London June 10 15 It is believed that the foreign guests will number 200—from all the European states, America, Japan, etc They will probably be received by King Edward Social entertainments are being organized by the Marchioness of Salisbury, Lord Rothschild and others

"Thickening" in Cream.

Dr Collingridge, health officer of the city of London, refers in his monthly report to the pernicious practice of adding starch to cream There is no legal definition of cream, and the fat present in various samples varies from 15 to 55 per cent The public forms its opinion of the value of cream by the only standard available—its thickness The addition of starch or gelatin gives a fictitious appearance of thickness A very small addition of thickening material will compensate for the absence of a large amount of fat and allow an inferior article to be sold as cream A departmental committee in 1901 reported that the artificial thickening of cream by the addition of gelatin or other substance should raise a presumption that the cream is not genuine The sale of foods and drugs act of 1875 makes it an offense to sell any article of food to which any matter or ingredient not injurious to health has been added fraudulently to increase the bulk, weight or measure, or to conceal the quality

VIENNA LETTER.

(From Our Regular Correspondent)

VIENNA, March 19, 1907

Professional Secrecy and the Present Law

In a lecture delivered before the medicolegal society, Dr Kienböck illustrated the false position in which the practitioner is placed by the law Thus, the medical attendant is bound not to disclose the nature of the illness of his patient nor to give any particulars in regard to the condition of any one applying to him for professional help, while, on the other hand, the practitioner must inform the officers of an insurance company or of other corporations, who engage his services, of the health of certain individuals, thus violating the law Furthermore, practitioners are bound to inform the police of every case of injury or suspicious disease, and to inform the magistrates of cases of infectious disease Each one of these breaches of professional secrecy is, strictly speaking, amenable and involves danger to the doctor On the other hand, the persons auxiliary to the doctor—nurses, servants, not qualified assistants—are not bound by law to keep the secrets of which they may obtain knowledge during their function in the service of the doctor In cases of suits for fees, the doctor is not allowed to disclose to the court the nature of the disease of the patient although such a disclosure might mean for him a very substantial help in the litigation Kienböck also spoke of the painful position of the practitioner, who by his office learns of dangerous conditions of his patients as, for instance, in cases of syphilis or tuberculosis of a bride or bridegroom, or of the deafness or blindness of a railroad employé, or of the mental condition of a business man suffering from cerebral paralysis The lecturer demanded the adoption of a wider view of modern ethics in legislation and the addition of necessary provisions to the law now in force

Jubilee of the Vienna "Operateur-Institut"

The "surgeon's school," or "Operateur Institut," of Vienna recently celebrated its centennial anniversary It was founded by Emperor Francis I, who, acting on the suggestion of the then famous professor of surgery, Dr V v Kern, ordered him to teach several well qualified surgeons in a special way and he the emperor, would defray the expenses This institution was then incorporated in the University of Vienna, and in 1863 the two surgical clinics were ordered to take the "Operateur Institut" over Since then, every surgeon, who desired any special instruction in his branch, had to become a pupil of this school, admission was not easy, as a severe examination in anatomy and surgery had to be passed before obtaining permission to enter the clinic It may be stated that every living well qualified surgeon in Austria has been a pupil of this school All the regular professors of surgery in the Vienna university have been directors or teachers in the institute, so that there is always first class instruction, while the clinical material to be drawn on numbers upward of 25 000 patients for both clinics The centennial celebration was described in these columns on page 1043

Pharmacology

GUDE'S PEPTO MANGAN

An Investigation Into the Reliability of an Alleged Scientific Report.

In THE JOURNAL, Sept, 23, 1905, we exposed the misuse, by the exploiters of Pepto Mangan, of the government report on anemia in Porto Rico The conclusion of the Government Commission, which investigated the anemia prevalent in Porto Rico, was that iron was of subsidiary importance in treatment, and that the carbonate, as represented by Blaud's pills, seemed to give the best results Immediately Messrs M. J Breitenbach & Co used this report to exploit their preparation (Pepto Mangan)—first in advertisements and reading notices and later in a garbled extract of the report printed in pamphlet form and scattered broadcast among physicians This pamphlet conveyed the idea that Pepto Mangan had been endorsed by the government as superior to any other iron preparation, and that it had proved most efficacious in the treatment of anemia, that "this report alone would suffice to establish Pepto Mangan at once as the foremost hematinic known" The Commission later published a denial stating that Pepto Mangan was used by them only for a little while because it was found to be of even less value than other iron preparations

Some months ago another pamphlet was sent out by the same company purporting to give the results of the treatment of 32 cases of "infantile anemia" at the Infants' Hospital, Randall's Island, New York City The report was written by Mateo M Guillen, designated as house physician and surgeon A cursory examination of this pamphlet showed that five of the 32 cases cited had an initial blood count of over 4 500,000 erythrocytes, and one over 70 per cent hemoglobin, with nearly 4,000,000 reds Thus 18 per cent of the cases cited could not be classified as anemia Moreover, in 26 cases the anemia had followed some acute disease or the patients were convalescent from such a disease In either case, spontaneous improvement was naturally to be expected

THE UNRELIABLE REPORT

These facts aroused suspicion and suggested further investigation Accordingly, we had the books of the hospital inspected by a competent representative, who devoted consid

Case No	Name	Age	Color	Diagnosis	Condition before Treatment	Period of Treatment	Red Cells 1st Count	Red Cells 2nd Count	Red Cells 3rd Count	Hemoglobin 1st Count	Hemoglobin 2nd Count	Hemoglobin 3rd Count	White Cells 1st Count	White Cells 2nd Count	White Cells 3rd Count	Result
I	E F	18 mos	White	Pseudo-Leukaemia	Hopeless	15 weeks 5 days	2 366 000	3 466 666		20%	58%		16 000	8 000		Improving rapidly
II	K F	2 years	"	Anaemia following Acute-Ileo-Colitis	Very poor	15 " 3	2.533.333	4.851 851		40 1	75%		10 000	7 133		Cured
III	J F	22 mos	Colored	Anaemia following Pneumonia Marked Rickets	Fair	15 " 2 "	3 120.000	4.580.000		40%	68%		6 925	6 200		Cured
IV	G V	19 mos	White	Anaemia following Pneumonia Tuberculosis	Poor	15 "	2.533.333	3.967 444		40%	64%		15 520	10 600		Improved
V	H V	19 mos	"	Anaemia following Measles Bronchio Pneumonia Tuberculosis Bronchial Glands	Fair	15 "	3 132.000	4.580.851	3.012 300	37%	69%	40%	5 600	12 300	15 400	Died
VI	W G	20 mos	"	Anaemia following Whooping Cough	Fair	16 "	3.200 000	5 122.222		37%	64%		19 000	12.000		Cured
VII	G S	16 years	Colored	Anaemia following Double Cervical Adenitis	Good	10 "	3 780.000	4.600 000		75%	80%		15.200	7 400		Improved
VIII	R R	31 mos	White	Anaemia following Broncho-Pneumonia	Poor	14 "	3.845 714	3.970.370		39%	54%		12.700	7 800		Cured
IX	E F	29 mos	"	Anaemia following Entero Colitis (Convalescent)	Fair	14 "	3 128.000	5.195 555		47%	70%		5 900	6 200		Cured
X	D S	10 years	"	Anaemia accompanying Pneumonia Pleurisy	Fair	13 " 5 "	3.720.000	5.213.333		48%	78%		10 400	5 900		Cured
XI	R F	2 years	"	Anaemia following Whooping Cough Bronchitis	Fair	13 "	3 576 000	4.766 666		45%	67%		15 350	6.300		Cured
XII	E G	18 mos	"	Anaemia following Measles Broncho Pneumonia Diphtheria	Fair	12 "	3.780.000	4.249.000		44%	58%		10 000	8 800		Improved
XIII	J H	5 years 3 mos	"	Anaemia following Whooping Cough Retro Pharyngeal abscess (Convalescent) Cervical Adenitis Bronchitis	Fair	11 "	5 400 000	5.277 777		70%	65%		10 000	12 700		Improvement continued
XIV	W T	2 years 4 mos	"	Anaemia following Pertussis (Convalescent)	Poor	12 "	2 972.000	4 354 444		45%	74%		8.000	7 200		Cured
XV	K G	11 years	"	Anaemia following Entero Colitis (Convalescent)	Good	12 "	4.590 666	6.700.000		60%	78%		9 100	7 200		Cured
XVI	W S	22 mos	"	Anaemia accompanying Acute Epiphysitis of Left Femur Tuberculosis	Bad	9 "	2.904 000	3.872.222		40%	64%		11.600	10 800		Improved
XVII	D S	3 years	"	Anaemia accompanying Hydrocephalus Post Operative	Good	17 "	5.364 562	3.007 602	3 472.222	82%	53%	68%	5 600	7 850	9 200	Improved
XVIII	W B	3 years 8 mos	"	Anaemia following Ileo Colitis (Convalescent)	Bad	15 "	4.360.444	5.029 602		48%	62%		14 700	12.600		Cured
XIX	W B	3 years 6 mos	Colored	Anaemia following Enteritis Pulmonary Tuberculosis	Hopeless	14 6 "	3 947 676	4.977 777		42%	58%		10 500	9 700		Cured
XX	J B	28 mos	White	Anaemia accompanying Summer Diarrhoea	Bad	12 "	3.280 000	4.313 333		39%	60%		14 000	10 700		Cured
XXI	W W	2 years 10 mos	"	Anaemia accompanying Summer Diarrhoea	Hopeless	10 "	3.950.492	4.492.592		48%	58%		20 300	17 200		Cured
XXII	R S	7 mos	"	Anaemia following Gastro Enteritis (Convalescent)	Hopeless	5 "	2 989 798	3.203 703		38%	56%		10 600	6 900		Cured
XXIII	E S	26 years	"	Simple Anaemia	Fair	21 "	4.798 454	5 193 333		60%	80%		7 000	6 900		Cured
XXIV	E K	9 years	"	Simple Anaemia	Fair	15 "	4 678 594	5 289 939		72%	82%		7 100	6 400		Cured
XXV	V S	2 years	"	Anaemia accompanying Acute Gastro Enteritis	Poor	17 "	3 254 698	4.892 564		44%	66%		11 200	8 400		Cured
XXVI	J C	3 years	"	Anaemia accompanying Syphilitic periostitis (Gummatous Bones)	Very poor	12 " 3 "	3.984 999	3.796 874	3.674 978	34%	40%	38%	14 600	14 000	16 000	Not improved
XXVII	F B	3 years 6 mos	"	Anaemia accompanying Pott's disease (Bone Abscess)	Poor	10 "	3 394 656	4 142.222		36%	40%		10 000	9 400		Improved rapidly
XXVIII	F S	22 years	"	Simple Anaemia	Fair	13 "	4 463 676	5 293 876		66%	80%		9 800	7 600		Cured
XXIX	J D	4 years	"	Anaemia accompanying Pott's disease	Poor	15 "	3 979 888	4.898 788		66%	76%		9.000	7 800		Improved somewhat
XXX	M G	10 years	"	Anaemia accompanying Sarcoma of scapula	Hopeless	18 "	2 875.555	2.974 000		34%	42%		16 000	17 500		"
XXXI	E G	7 years 6 mos	"	Simple Anaemia	Fair	2 "	3 956 666	4.897 000		66%	78%		7 200	6 200		Cured
XXXII	M F	5 years 6 mos	"	Simple Anaemia	Poor	1 "	4.234 666	5 455 333		66%	78%		7 900	6 100		Cured

The above table is reproduced from a sheet 11 by 14½ inches which is a part of the pamphlet On the top of the [illegible] the following in display heading Comparative table of 32 cases of Infantile Anemia treated at the City Infants Hospital Randall's Island New York City during a period of four months with Gude's Pepto Mangan By Dr Mateo M Guillen House Surgeon

erable time to a careful examination of the original records of the hospital His report follows

"In reply to your request that I examine into the authenticity of the cases advertised as having been treated with Pepto Mangan at the City Hospital, Randall's Island, I am able to make the following report, after a thorough examination of the records of the hospital in the clerk's office, the daily charts and the physicians' order books

"Dr Mateo M. Guillen, house physician in 1902, whose name is attached to the report as having treated the cases with Pepto Mangan, has been in South America since that time Through the kindness of Dr William L Stowell, visiting physician at the Infants' Hospital, I was furnished with the full names and data of the patients whose cases are reported, so I was able to get the correct histories of them in the hospital records Dr Stowell informed me that he was aware that *some* of the patients had received Pepto Mangan simply as one form of iron, though he believed the simpler forms of iron preferable, and that if I would trace the treatment in the cases I would doubtless find the simpler forms of iron prescribed.

"Examination of the hospital records and daily charts of the cases show remarkable discrepancies from the results and treatment as advertised in the Pepto Mangan pamphlet Some of the most striking are the following

"Three patients, reported in the pamphlet as *cured* through the use of Pepto Mangan, the hospital records show *died*, viz.

"Case II, K. T (Katie Turner)

"Case XIX, W B (William Barkdale)

"Case XXII, R. S (Reuben Schehr)

"The results in all the cases are advertised as being obtained by Pepto Mangan On the contrary, the daily charts and the doctor's order books show that some of the patients *never* received Pepto Mangan For instance, in Case XII, L C (Lillian Codney), instead of Pepto Mangan, was given *syrupus ferri iodidi*, and at other times malt zyme and liquid peptonoids and various local, external and symptomatic medicines, but at no time was Pepto Mangan prescribed

"Similarly, in Case XIII, I H (Irene Harowitz) was never given Pepto Mangan

"The charts of Case IV, C V (Catherine Vaugh) show that Pepto Mangan was only prescribed once, and at other times she was given *syrupus ferri iodidi*

"Similarly, the charts of Case V, H. V (Helen Vaugh) show that Pepto Mangan was only prescribed once, and at other times was given *syrupus ferri iodidi*

"In Case XVIII, W B (William Born) was given Pepto Mangan on July 19, but it was discontinued on August 13, although the pamphlet states that he was under treatment fifteen weeks

"In Case X, D S (David Smulewitz) was given syrup of hypophosphites and cod liver oil along with the Pepto Mangan

"I was informed by Dr Oberdorfer who was on the hospital staff at the same time, that in Case I, E P (Eva Pases), though Pepto Mangan was given, arsenic was pushed in *very large doses*

"Of the thirty two cases reported in the Pepto Mangan pamphlet, only twenty two were reported by Dr Stowell, and among the history charts for that period I was unable to find any cases corresponding to the initials of the additional ten cases

"I hereby swear that the above statements are correct data taken from the records of the City Infants' Hospital, Randall's Island, and am able at any time to prove them by the mentioned records

"GEORGE M GELSER"

[Mr Gelser is a senior student in the medical department of Cornell University]

SUMMARY

This throws a somewhat different light on the impressive report of thirty two cases Analysing the results obtained, we find that 13 cases, namely, Cases VII, XV, XXI, and all of the cases from XXIII to XXXII were not found on the hospital records The table in the pamphlet shows that the patient in Case V died The hospital records show that Patients II XIV and XXII, which were reported as cured, also died The records also show that in Cases XII and XIII Pepto Mangan was never given that in Cases IV and V but a single dose was given that in Cases I and X this preparation was given in conjunction with other preparations, such as syrup of hypophosphites and iron, cod liver oil, etc, which can certainly claim a share in the results In Case XVIII, in which the report says Pepto Mangan was given for fifteen weeks, the records show that it was given but three weeks and a half Cases XIII, XV and XVII are not cases of anemia *at all* Striking these from the table, we have left eight cases entered on the hospital records, in which there is evidence that Gude's Pepto Mangan was administered But the table itself shows that seven of them, namely, Cases III, VI, VIII, IX, XI, XIV and XX, were entered as convalescent at the time of beginning treatment, the anemia following some acute disease, such as pneumonia, whooping cough, bronchopneumonia, enterocolitis and summer diarrhea In all of these cases, anemia is to be expected during the height of the disease, and rapid recovery from the anemia, as soon as convalescence is established would also be observed in 95 per cent of all cases which received ordinary care and nourishment, regardless of medication The imposing and delusive chart which has, on first sight, such an ultra scientific appearance, melts down under impartial investigation to a single case which is in any sense worthy of consideration Case XVI is reported as that of a child, 22 months old, suffering from anemia, accompanying acute tubercular epiphysitis In this case, Pepto Mangan was given for nine weeks An increase of red blood corpuscles from 2,904,000 to 3,872,222, and an increase of hemoglobin from 40 to 64 per cent took place in the same period Even the sanguine and optimistic author of the pamphlet and the compiler of the chart does not venture to record this case as anything more than improved

PREVALENT DISREGARD OF TRUTH

Two things may be learned from this interesting analysis The first is that so called scientific reports are only of value in proportion to the veracity and reliability of the writer Unless the statements of the author are founded on scientifically established facts, they are delusive and as dangerous as the false lights of a shipwrecker or the decoy signals of a train robber It seems incredible that any physician having the slightest conception of the dignity and honor of the profession would deliberately falsify and distort hospital records for the sake of the pittance offered by proprietary houses, whose preparations he lauds, or for the sake of the cheap notoriety which he obtains while lending his name to such a deception

The second and equally deplorable fact is that firms composed of men who are personally honorable seek to obtain business by means of such unjustifiable methods It might be said in defense that the M J Breitenbach Company did not investigate the statements set forth in the pamphlet, and that it relied on the truthfulness of the writer This does not relieve the firm of its responsibility

There is an apparent tendency on the part of proprietary houses to accept any report, statement or testimonial, no matter how obviously absurd, distorted or highly colored—if only it be favorable to their preparations—and to eliminate and to suppress any unfavorable reports or facts This tendency has helped to produce the present deplorable conditions in the proprietary medicine business Such methods are not scientific, they are not even in accord with the ordinary principles of business honesty, which are supposed to obtain among reputable merchants An honorable and legitimate business should have a better foundation than advertising matter which will not stand investigation

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Lactopeptine Exposed Thirty Years Ago

SOUTH BEND IND March 23 1907

To the Editor —The report on Lactopeptine in THE JOURNAL of March 23 is very interesting and it is hoped that it will prove equally instructive to your readers While it is interesting to us pharmacists I can not say it is especially instructive, for the facts contained therein have been surmised if not actually known to pharmacists for many years The surprising thing however is that the members of the medical profession should go along blindly prescribing such preparations year after year, often against our protest, as was more espe

cially the case with the acetanilid mixtures For years the pharmaceutical journals had pointed out the deception concerned in the exploitation of the medical profession (and eventually of the public) by nostrums of this character without avail, until the Council, through THE JOURNAL, began some two years ago, to show up the true character of these nostrums Lactopeptine and especially its elixir have been used in enormous quantities by the medical profession, although in 1876, soon after its introduction, Prof Emil Scheffer of Louisville, Ky, contributed a paper to the American Pharmaceutical Association, in which he reported some experiments he made on Lactopeptine, and proved that it had no greater digestive value than the saccharated pepsin then in vogue This paper appeared in the Transactions of the American Pharmaceutical Association for 1876 Although Scheffer was an authority on the subject, he being the author of the first process for obtaining pepsin in a pure state, it is not apparent that any attention was paid to this article by the medical profession, in fact, it was entirely ignored by medical journals, and extensive advertising soon made Lactopeptine the most extensively employed proprietary article This leads to the observation how helpless we pharmacists have been in the past because of the lack of cooperation of the medical profession We have had to supply such articles as were in demand, and when such articles as the Compound Powder of Acetanilid and the Compound Powder of Pepsin and its elixir in the Pharmacopeia and National Formulary are criticised, such criticism should be directed against the members of the medical profession because of their lack of interest and cooperation in the preparation of these standard works Now that their attention has been so forcibly directed to this anomalous condition, it is hoped that physicians will participate actively in the revision of these joint authoritative standards

LEO ELIEL,
President, American Pharmaceutical Association

Book Notices

A TREATISE ON THE MOTOR APPARATUS OF THE EYES Embracing an Exposition of the Anomalies of the Ocular Adjustments and Their Treatment with the Anatomy and Physiology of the Muscles and Their Accessories By G T Stevens M D Ph D Illustrated with 184 engravings some in colors Cloth Pp 400 Price $4 50 net. Philadelphia F A. Davis & Co 1906

This book is offered as a sequel to the author's work on "Functional Nervous Diseases," the preface stating that "difficulties of adjustments of the eyes are a source of nervous trouble, and more frequently than other conditions constitute a neuropathic tendency" The subject is very fully covered, beginning with a short historical sketch dealing with the time when actual strabismus only was recognized, and including our present recognition of heterophoria The comparative anatomy of the eye muscles of fishes, birds, reptiles and mammals is considered in the chapter devoted to anatomy This chapter is particularly exhaustive and is divided into ten sections, which deal with the movements and positions of the eyes, with comparative anatomy, with the orbital measurements, planes, axes, etc, with the eye-muscles themselves, and with the insertions of the tendons, etc, covering the anatomy of the orbital aponeuroses, capsule of Tenon, vessels and nerves Under physiology is discussed the subject of binocular vision, with the various methods of detecting and encouraging its development The remainder of the book is devoted to the study of the anomalous conditions of the motor apparatus of the eyes, consistent and inconsistent with the physiologic state The illustrations are modest in character and number as compared with the average book of to day As a whole, it offers a fair résumé of the important advances made by its author in muscle work during the past ten years, but neglects those ideas advanced by others

WOMAN IN GIRLHOOD WIFEHOOD MOTHERHOOD A Guide in the Maintenance of Her Own Health and that of Her Children By M Solis Cohen A B M D Instructor in Physical Diagnosis University of Pennsylvania Illustrated with Color Plates Scientific Drawings and Half tone Engravings with Manikin Chart printed in colors with an Index Cloth Pp 409 Price $2 00 net Philadelphia The John C Winston Company

As a book for the wife and mother and a guide to such domestic medicine as is really desirable, this work meets all requirements of clearness, simplicity of language accuracy of statement, and temperate, judicious treatment of delicate subjects While it gives helpful suggestions as to the preservation of health and as to action in emergencies, it discourages self medication and especially the resort to "patent medicines" The work consists of three sections, general hygiene, and the rules for care of the body applying especially to women The hygiene of the pregnant woman and the care of mother and child during confinement, and the hygienic care of children The popular aim of the book requires the introduction of many topics which are only indirectly of medical interest, but these parts appear to have been written with judgment and care Many illustrations are introduced, both of medical and artistic merit The work appears to be one that the physician can cordially recommend to his patients, and deserves a place in every home

PREVALENT DISEASES OF THE EYE A Reference Handbook especially Adapted to the Needs of the General Practitioner and the Medical Student By S Theobald M D Clinical Professor of Ophthalmology and Otology in the Johns Hopkins University etc Cloth Pp 551 Price $4 50 net. Philadelphia W B Saunders Company 1906

This is the most comprehensive work yet written for the special benefit of the general practitioner The book begins with a very complete synopsis of contents a distinct advantage to the busy man who, by its aid may read just what he needs with little expenditure of time The question of diagnosis is given greatest space and prominence, as it should be The family physician sees the eye cases first, and a knowledge of the more important diseases is essential to him in order that he may treat the simpler cases and send the severe ones to an ophthalmologist without delay The line is definitely drawn however, between those cases which can be cared for by the family physician and those requiring the services of a specialist, and the proper warning sounded The more technical divisions of ophthalmology such as the use of the ophthalmoscope muscular anomalies, etc, are merely mentioned, as they require thorough study and preparation to be of definite value The dominant note of the book is the completeness with which diagnostic methods are set forth in a style very clear and readable

MODERN SURGICAL TECHNIC IN ITS RELATIONS AND WOUND TREATMENT By C Y Pearson M D M C F R C S Professor of Surgery Queen s College Cork Illustrated with Two Colored and Other Plates Cloth Pp 392 Price $3 50 net. New York William Wood & Co

The author has compiled in this work the subject matter of a series of lectures on the technical details of modern surgery It is designed to meet the requirements of the students and assistants in surgery who are not familiar with the science of bacteriology and the prevention of wound infections Its chapters are devoted to a clear and concise discussion of surgical bacteriology and infections The mode of wound infection, the consequence of such infection and the various methods employed in the prevention of infections are treated in a consecutive and exhaustive manner A chapter devoted to the preparation of ligature and suture material is especially complete and comprehensive Some attention is given to operative technic including a discussion of surgical needles and their uses, together with a description of the various kinds of sutures

TEXT BOOK OF THE PRACTICE OF MEDICINE For Students and Practitioners By Hobart Amory Hare M D B Sc Professor of Therapeutics in the Jefferson Medical College Philadelphia Second Edition Revised and Enlarged with 171 Engravings Cloth Pp 1172 Price $5 00 net Philadelphia Lea Febiger [illegible]

That this work has met the needs of practitioners as well as medical students is sufficiently evidenced by the fact that a new edition has been called for in two years since the first appearance of the work The book has been thoroughly revised the latest views that have been accepted [illegible] and clinically correct having been embodied [illegible] not yet established as facts have been [illegible] ment of the subject as in the f[illegible] clear concise and practical The b[illegible]

Genito Urinary Diseases and Syphilis By H H Morton M D Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital Genito Urinary Surgeon to the Long Island and Kings County Hospitals and the Polhemus Memorial Clinic. Illustrated with 158 half tones and photo engravings and 7 full page color plate Second edition revised and enlarged Cloth Pp 500 Price $4 00 net Philadelphia F A Davis Company 1906

This work is admirably written, well arranged and well printed, and the author's ideas, which are those of the German school, are clearly set forth The subject of gonorrhea is well covered, and the treatment of acute and chronic urethritis is explicitly dealt with Recapitulations, which are frequent, could well have been sacrificed to the elaborations of the more important subjects The author's advice in case one fails to find the urethra in doing an external urethrotomy without a guide, to blindly puncture with Guiteras' trocar in order to reach the limit of the canal behind the stricture, must surely be condemned as unwise, as the results might be unsatisfactory, not to say disastrous, if such procedure were followed by others than the expert operator Neither can we agree with the statement that it is necessary to produce ptyalism in order to cure syphilis, nor with the advice to curette the floor of a gummatous ulcer Rather striking is the omission of some of the generally accepted remedies, viz Nitrate of silver and chromic acid solutions, often used as applications to mucous patches

Practice of Obstetrics Designed for the Use of Students and Practitioners of Medicine By J C Edgar Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College Third edition revised Cloth Pp 1071 Price, $6 00 net. Philadelphia P Blakiston s Son & Co 1906

The same classification has been followed in this as in the previous editions The size of the book has been reduced 100 pages, but 140 new illustrations have been added The following subjects have been rewritten Development of embryo, fetus, fetal membranes and fetal structures, chorioepithelioma malignum, treatment of placenta prævia, toxemia of pregnancy, etiology of eclampsia, ectopic gestation, treatment of pelvic deformity, morbidity of the puerperium, indications for the induction of abortion and premature labor, use of forceps, Cesarean section, vaginal Cesarean section, Porro operation, and complete and incomplete hysterectomy New subjects added are Appendicitis complicating pregnancy, tapeworm in pregnancy, fibroma molluscum gravidarum (illustration) hematoma of the vulva (illustration), lactation atrophy of the uterus and breasts brachial birth paralysis, vaginal incision and drainage (illustration), new history charts for institution work The illustrations are good and the schematic drawings which accompany many of them add greatly to their value

A Manual of Normal Histology and Organography By Charles Hill Ph D M D Illustrated Flexible Leather Pp 463 Price $2 00 net. Philadelphia W B Saunders Company 1906

This manual presents the fundamentals of histology in a clear cut manner, but the evident intention of the author is that this book should be used as an aid in laboratory work and to prepare the student for more thorough study in the class room rather than as a text book. The arrangement of subjects is excellent, the central idea being to lead the student up gradually from the simple to the complex Considerable space is devoted to the mouth, especially the teeth, thus making the book a valuable one for students of dentistry The illustrations are numerous and well made The book is to be commended

Obstetrics Edited by J B De Lee A M M D Professor of Obstetrics Northwestern University Medical School with the Collaboration of D Roehler M D and H M. Stowe M D Vol 5 of the Practical Medicine Series. Comprising Ten Volumes on the Year s Progress in Medicine and Surgery Under the General Editorial Charge of G P Head M D Professor of Laryngology and Rhinology Chicago Post Graduate Medical School Series 1906 Cloth Pp 756 Chicago The Year Book Publishers 1906

This book reviews the progress in obstetrics during the past year Little advance has been made in the scientific fields of obstetric research Under 'Eclampsia" are considered the biologic theories of the origin of this condition, and attention is directed to Zweifel's announcement that lacticaciduria is an important etiologic factor The work as a whole, however, deals with the practical side of obstetrics

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES, MEDICAL LEGISLATION, ETC

Suggestions for Authors

In the midst of his exile for research on syphilis in monkeys in Java, Neisser has found time to voice his exasperation at certain habits of medical authors and to beg them to refrain He has written an open letter on the subject which he sent simultaneously to the principal medical journals of Germany and which appeared in most of them about March 12 It is noteworthy that Neisser does not write from the standpoint of an editor, but merely from that of an earnest seeker for what is really important in current medical literature

He appeals to medical writers to make the titles of their articles more concrete and thus give readers an idea as to the writer's views on the subject discussed "For instance," he says, "instead of the title, 'Calomel Salve in Prevention of Syphilis,' write, 'Efficacy' or 'Non efficacy of Calomel Salve,' etc , instead of 'Administration of Mercury by the Rectum,' write, 'Inefficacy of Rectal Mercurial Treatment,' instead of 'A New Remedy for Gonorrhea,' why not name the remedy and state at the same time whether the writer's experience with it has been favorable or the reverse" "The worst of all titles," he adds, "are those such as 'Therapeutic Notes,' 'Clinical Experiences, and the titles in which an affection is called by a new name without reference to the name under which it has previously been recorded" He cites as an example of the latter "Tuberculosis cutis pruriginosa," remarking how much better it would have been to have written, "Tuberculosis cutis pruriginosa, the so called Urticaria perstans" "One glance at the title would have then informed the reader—and likewise the larger multitude of non readers—exactly what the author was aiming at. Even those most interested in a subject are unable to read all the periodicals, the archives and journals, weeklies and monthlies, centralblatts and year books, all the time, but when they have occasion to read up on any special subject they are grateful, indeed, to those who make their sifting of the literature as easy as possible for them The best way to do this is to make the titles of the articles a reflection in condensed form of their actual concrete contents, not a vague generalization" The titles need not be any longer, as a rule He commends heartily the habit of appending a good summary of the article, adding that if authors omit this they can not complain if their communications fail to attract the attention they deserve

He also expresses dissatisfaction with the articles printed without paragraphs or headlines This he finds very often in English works, and he says that it makes the reading of the articles very difficult for him, adding that frequent paragraphs, numbering or lettering the different parts of the article, and the occasional use of black letter type would make it much easier to read the article and to discern the drift of the author's ideas, even when hastily scanning the article Those works will be read the most eagerly and the most frequently which realize some of the above suggestions

In conclusion he expresses his abhorrence of the footnotes which say merely *l c* (*loco citato*, in the place before cited), requiring long and weary search, perhaps, for the original citation He continues "Some authors add a bibliography without citing names or without references to the titles in the text, so that such a tail piece, parading as an evidence of the literary and collecting industry of the author (or of some one paid for looking up the references) is absolutely useless to any one A bibliography is valuable only as it saves future readers the trouble of hunting up the references Consequently, the contents of each work cited should be indicated in some way This might be done by adding a brief summary of the article to each title or by grouping them according to the phases of the subject Quoting rare and practically inaccessible periodicals, transactions and the like, has scarcely more than decorative value At least, they should be accompanied by the indication of some accessible periodical in which an abstract of the article cited can be found"

Physicians and Their Profession.

Under the above title the Trenton (N J) *American* comments editorially as follows

"There are few professional men so habitually misunderstood as physicians The clergy are expected to practice self effacement, to work unselfishly for others, to be constant in good works, hoping only for a future reward But the bodily physician ofttimes vies with the physician of souls in his loving kindnesses and self sacrifices, yet his acts are usually rewarded with suspicion

"Popular ignorance is responsible for quackery in religion and in medicine There are hosts of charlatans pretending to be able to cure souls of sin for a price, and there are quite as many who, for a similar consideration promise to cure bodily ailments If people would only take the trouble to learn something of religion and something of medicine, they would escape impostors in both of these professions

"The health of a community depends largely on its information regarding the laws of Nature Epidemics are invariably products of ignorance Disease is the result of natural causes The medical profession has sought out and is seeking out these causes It alone can not remove them, but the intelligent action of the people can remove many of them

"It has long been a practice of the Christian churches to send missionaries abroad to open a way for the establishment of churches and the advancement of religion The American Medical Association has undertaken a similar missionary work and Dr J N McCormack of Kentucky is touring the country for the enlightenment of many on the subject of medicine and its practitioners His mission is to inform the ignorant of the possibilities and limitations of medicine and how to avoid calling the doctor A strange mission for one whose living depends on his patients? Yes if the practice of medicine is regarded as a mere money making agency But not at all strange if one is large enough to believe that all men are not sordid seekers after material gain."

More Societies Agree on Insurance Fees

Dr J Meigs of Lowell Mass, reports that the Middlesex North District Medical Society voted at its last meeting that a minimum fee of $5 for life insurance examinations be adopted. The Androscoggin County (Maine) Medical Association and the St Louis County (Minn) Medical Society have taken similar action

The Southern District (N D) Medical Society and the Van Buren County (Iowa) Medical Society have adopted the Kentucky resolutions

Legislation Notes

Dr J V Stevens, secretary of the Wisconsin Board of Medical Examiners, has sent out a circular letter to the 60 county secretaries in his state, emphasizing the importance of cooperation between the state board and the county and state medical societies Dr Stevens says

"Our board greatly appreciates the active and valuable assistance rendered by the county medical societies, in helping us to get rid of the medical quacks and impostors who have infested our state and robbed its citizens so long We want to enlist every member in the state in an active campaign to aid us in securing the passage of bills now pending in the state legislature, introduced for the purpose of improving the standing of the profession, and in defeating the bills introduced by the quacks themselves in an endeavor to weaken and destroy the effectiveness of the laws we now possess"

One of the most promising features of society activity since reorganization is the effectiveness of cooperation between state boards and the organized profession Where there is complete cooperation and unanimity between these two forces results otherwise impossible can be obtained

It is reported that the New York County Medical Society has asked for the passage of a bill to protect reputable physicians who may be called in consultation in cases in which criminal operations have been or may be later performed The law in New York state provides that any physician known to be present when an illegal operation is performed or who may be found treating a patient after such operation, is liable to arrest, fine and imprisonment An instance recently occurred in which a physician, a member of the New York County Medical Society, was called in consultation criminal operation had been performed On investigating the law he found that he was equally liable with the physician who had performed the operation It is reported that steps will be taken to amend the law so as to relieve physicians of responsibility and liability in case they are innocently called in as consultants

The standing committee on tuberculosis of the Medical Society of the State of Alabama has issued a pamphlet and address to the members of the state legislature, setting forth the position of the profession regarding the control and suppression of tuberculosis in that state The pamphlet explains the most recent views on the subject and points out the manner in which, through proper legislation, the citizens of the state may be protected from this disease

The physicians of Shelbyville Ill have sent to the legislative committee of the Illinois State Medical Society a resolution protesting against the passage of senate bill No 21, introduced by Senator Chaffee, whose home is in Shelbyville regulating the practice of osteopathy in Illinois A protest is made against the passage of the bill and the legislative committee is urged to use every means in its power to prevent the bill from becoming a law

Queries and Minor Notes

Anonymous Communications will not be noticed Queries for this column must be accompanied by the writer's name and address but the request of the writer not to publish name or address will be faithfully observed

SWEET BREATH IN INFECTIOUS DISEASES

Chicago March 28 1907

To the Editor —In some cases of scarlet fever I have noticed a sweet chloroform like odor of the breath which seemed the only sign by which in the absence or masked condition of the rash and symptoms a diagnosis could be made What is the significance of this odor? Dr Charles F Stoty

Answer —A sweetish odor of the breath is frequently noticed in diabetes, in which it has been attributed to the presence of acetone A similar odor has been described as occurring in the breath of women during menstruation A sweetish odor has also been noticed in septicemia and pyemia As acetone is present in the blood in various diseases especially in the infections like measles scarlet fever etc It is likely that the sweetish odor of the breath will occasionally be noticed in such cases when not obscured by fetor No definite significance can be attached to such an odor as it may occur under such diverse circumstances If due to acetone it may not be of great importance The symptom should suggest examination of the urine however and may be reason for guarding against excessive acidosis which is to a greater or less extent a phenomenon of a large number of infections

DATE OF DESCRIPTION OF BEARD'S TREATMENT OF CANCER

Muskogee, I T March 27 1907

To the Editor On page 1070 vol xlviii No 12 is a reference to The Journal A M A Feb 17 1907 page 544 There was no issue on February 17 nor do I find on page 544 of The Journal of Feb 16 1907 the reference to Dr John Beard and the pancreatic treatment of cancer H H

Answer —The year is an error The abstract will be found in The Journal Feb 17 1906

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers U S Army week ending March 30 1907

Miller E W asst surgeon left Cuba en route to the United States to avail himself of twenty days leave of absence

Lynch Charles general staff will proceed at the expiration of his present leave of absence to Boston Mass for the purpose of delivering a lecture on April 17 1907 to the medical officers of the Massachusetts National Guard

Jones Leroy L asst surgeon now on leave of absence at Fort Leslie Mo will upon the expiration of his leave proceed to Jamestown Exposition Ground Va and report to the chief officer Jamestown Encampment for duty as a member of the medical and sanitary officer

Smith Lloyd L asst surgeon ordered to Point N Y to Fort Monroe Va for temporary duty

Rochelle F L asst surgeon ordered at San Francisco from Manila

Dr. Robert Craig Library
E. M. C. Medical College

Morris Samuel J, asst. surgeon now on duty at Fort Washington Md will furnish such medical attendance at Fort Hunt, Va, as may be needed during the absence of Contract Surgeon Hart

Gilchrist, Harry L, asst. surgeon, granted leave of absence for one month

Conzelmann F F, contract surgeon ordered from New York N Y to Fort Ethan Allen Vt. for duty

Roberts Ernest D contract surgeon, left Fort Riley, Kans, on leave of absence for ten days

Gunckel G I, dental surgeon arrived at San Francisco, from Philippine service ordered to Fort McPherson, Ga and granted leave of absence for two months

Mason G M dental surgeon relieved from duty at Fort McPherson Ga, and ordered to Manila P I for Philippine service

Miller A L. contract surgeon arrived at San Francisco on leave of absence for two months eighteen days, from the Philippines Division

Long S M contract surgeon, arrived at San Francisco, on leave of absence for one month from the Philippines Division

Lambkin F E contract surgeon arrived at San Francisco, from Philippine service, and ordered to his home, Baltimore, for annulment of contract

Byars C R contract surgeon left Fort Ethan Allen, Vt for his home Houston, Texas for annulment of contract granted leave of absence for one month

Van Kirk H H contract surgeon returned to Fort Logan Colo from temporary duty at Fort Wingate N M

Love Joseph W contract surgeon granted leave of absence for fourteen days

Bown, Polk D, contract surgeon, granted leave of absence for ten days

Ingalls Raymond E dental surgeon, ordered from Los Angeles Cal to Fort Leavenworth Kans, for duty

Navy Changes

Changes in the Medical Corps U S N, for the week ending March 30 1907

Farwell, W G asst surgeon detached from the *Worden* April 15 and ordered to the *Lancaster*

Schwerin L H, acting asst. surgeon, detached from the Naval Hospital, Norfolk Va and ordered to the *Worden*

Hammar A pharmacist ordered to the Naval Hospital, New Fort Lyon Colo for such duty as he may be assigned.

Holloway J H P A surgeon detached from duty with Naval Recruiting party No 4 and ordered to the *Indiana*

Ryder C E P A surgeon detached from duty at the Naval Recruiting Station Omaha, and ordered to the *Vermont*

Butler C St J P A. surgeon, detached from duty at the Naval Hospital San Juan Porto Rico and ordered to attend course of instructions at the Naval Medical School Washington D C

Brown E M P A surgeon detached from duty under the department of government and sanitation Canal Zone, Isthmus of Panama and ordered to the Bureau of Medicine and Surgery, Navy Department for special duty

Bogan F M P A. surgeon detached from duty at the Naval Recruiting Station Baltimore and ordered to attend course of instruction at the Naval Medical School Washington D C

May H A asst surgeon detached from the *Indiana* and ordered e to await orders

Iknap J L. asst surgeon detached from duty with Marines uba and ordered to the *Kentucky*

challer W F asst. surgeon detached from the Naval Medical hool Washington D C April 3 and ordered to *Brooklyn*

Brown H L. asst. surgeon detached from duty with Naval Recruiting Party No 3 and ordered to attend course of instruction at Naval Medical School Washington D C

Shook F M asst surgeon detached from duty at the Naval Hospital Mare Island Cal and ordered to duty under the department of government and sanitation Canal Zone Isthmus of Panama

Munson F M asst. surgeon detached from Naval Proving Ground Indian Head Md and ordered to attend course of instruction Naval Medical School Washington D C

Chappelear F D acting asst surgeon detached from Naval Medical School Washington D C and ordered to duty at the Naval Hospital Pensacola Fla

Castro D H acting asst surgeon detached from Naval Medical School Washington D C and ordered to duty at the Naval Recruiting Station Baltimore.

Curtis, F E acting asst surgeon detached from the Naval Medical School Washington D C and ordered to duty at the Naval Hospital Norfolk Va

Jones A McK acting asst surgeon detached from the Naval Medical School Washington D C and ordered to duty with Naval Recruiting Party No 4

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended March 27 1907

Pettus W J asst surgeon general, granted leave of absence for four days from March 27 1907

Stoner G W surgeon granted leave of absence for four days from March 18 1907 under Paragraph 189 of the Regulations

Banks C E surgeon leave of absence granted for fourteen days from Feb 21 1907 revoked

Carrington P M. surgeon granted leave of absence for three days from March 23 1907 under Paragraph 189 of the Regulations

Lumsden L L P A surgeon granted leave of absence for one month from March 18 1907 on account of sickness with permission to leave his station

Fox C P A surgeon granted leave of absence for one month from March 28 1907

Collins G L. asst surgeon granted leave of absence for one day

Long H D., asst. surgeon relieved from temporary duty at the Government Hospital for the Insane Washington D C and directed to rejoin his station at Ellis Island New York

Guthrie M C asst surgeon relieved from temporary duty at the Government Hospital for the Insane Washington, D C, and directed to proceed to Ellis Island, New York

Porter J S sanitary inspector, directed to proceed to Pensacola, Fla, for special temporary duty

Jackson, J M Jr acting asst surgeon granted leave of absence for 11 days from March 14 1907

Stanton J G, acting asst surgeon, granted leave of absence for three days from March 20 1907

Safford M V acting asst. surgeon directed to proceed to Ellis Island New York for special temporary duty, upon completion of which rejoin his station at Boston

Small E M, acting asst. surgeon, granted leave of absence for 8 days beginning April 15 1907

Thurston E J pharmacist, relieved from duty at Gulf Quarantine Station and directed to proceed to Mobile Quarantine Station, reporting to the medical officer in command for duty

La Grange, I V pharmacist, relieved from duty at Boston and directed to proceed to Savannah Ga reporting to the medical officer in command for duty and assignment to quarters

BOARD CONVENED

A board of medical officers was to meet at Seattle, Wash, March 28 1907 for the purpose of making physical examination of an alien Detail for the board Asst. Surgeon H G Ebert, chairman Acting Asst. Surgeon F R Underwood recorder

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General Public Health and Marine Hospital Service, during the week ended March 29 1907

SMALLPOX—UNITED STATES

Georgia Augusta, March 12 26 11 cases

Illinois Chicago March 16-23, 9 cases 1 death Galesburg March 9-23 9 cases Springfield March 7 14 1 case Danville March 13 27 3 cases Stark County to March 13 275 cases.

Indiana Culver Jan 21 March 5 6 cases, Elkhart, March 16-23 4 cases Indianapolis March 10-24 9 cases

Iowa Dubuque March 18 63 cases Peoria, Feb 2 March 23 63 cases Spencer Jan 8 March 14 5 cases

Kansas General Jan 1 31 126 cases

Louisiana New Orleans, March 9 23 35 cases 2 deaths (7 cases imported) Shreveport March 9-16 1 case

Massachusetts Boston March 16-23 1 case

Michigan Centerville, Feb 20, 36 cases Detroit Feb 9 23 12 cases

Minnesota General Jan 28-March 11, 295 cases Winona March 9 1 case March 16-23 2 cases

Mississippi Natchez Feb 2 March 16 13 cases

Missouri St Joseph March 16-23 15 cases, St Louis,1 case.

New Jersey Newark March 16-23 1 case

New York Binghamton March 16-23, 3 cases New York 3 cases

North Carolina Charlotte March 9 23 2 cases Greensboro March 9 16 1 case

Ohio Cleveland March 15 22 1 case Hamilton Feb 9-16 9 cases

South Dakota Sioux Falls March 9-23 2 cases.

Texas Galveston March 15 22 1 case Williamson County Georgetown included Dec to March 23 75 cases 1 death

Virginia Richmond March 9 23 2 cases

Washington Spokane March 2 16 26 cases 1 death

Wisconsin Milwaukee, March 9 23 11 cases Wausau March 9 16, 1 case.

SMALLPOX—INSULAR.

Philippine Islands Manila Feb 2 9 1 case (on S S *Ban Yek*)

SMALLPOX—FOREIGN

Africa Algiers Feb 1 28 2 deaths

Brazil Para March 2 9 2 cases Rio de Janeiro Feb 24 March 3 4 cases 1 death

Chile Coquimbo Feb 25 24 cases 1 death Iquique Feb 25 present

China Hongkong Jan 26-Feb 2 9 cases 6 deaths

Colombia Cartagena March 2 9 present.

Ecuador Guayaquil Feb 23-March 2 4 cases

Egypt Cairo Feb 25 March 4 3 cases 1 death

France Marseilles Feb 1 28 230 deaths Paris Feb 23 March 9 14 cases

Germany Bremen March 2 9 1 case

Gibraltar Feb 25 March 10 5 cases

Great Britain Bristol Feb 23 March 2 1 case Cardiff March 2 9 2 cases

India Bombay Feb 12 26 10 deaths Calcutta Feb 9 16 41 deaths Madras Feb 16 22 1 death

Italy Naples March 9 16 2 cases

Madeira Funchal Feb 24 March 10 3 cases 2 deaths

Mexico Aguas Calientes March 9 16 10 deaths Jalapa March 8 15 1 death Mexico Dec. 29 Jan 26 66 deaths Jan 27 Feb 16 44 deaths

Netherlands Rotterdam March 2 9 1 death

Portugal Lisbon Feb 23 March 9 11 cases

Russia Moscow Feb 9 March 2 3 cases 4 deaths Odessa Feb 23 March 2 43 cases 7 deaths Riga Dec. 1 31 16 cases March 2 9 6 cases Warsaw Feb 2 9 3 deaths

Salvador San Salvador Feb 9 16 2 cases

Spain Barcelona Feb 18 March 10 7 deaths Cadiz Feb 1 28 6 deaths Seville 28 deaths Valencia Feb 23 March 2 1 case

YELLOW FEVER—UNITED STATES

Louisiana Mississippi River Quarantine March 20 1 case (on S S *Cayosoto* from Cuban and Mexican ports)

Texas Galveston Quarantine March 22 3 cases (on S S *Basil* from Para)

YELLOW FEVER—FOREIGN

Brazil Nichtheroy Feb 16 1 case Rio de Janeiro Feb 24 March 3 2 cases, 2 deaths

Ecuador Guayaquil Feb 23 March 2 7 deaths

Mexico Paraje Nuevo March 3 9 1 case 1 death

Peru Callao Feb 17 19 1 case 1 death (on S S *Palena*)

CHOLERA

India Bombay Feb 12 26 3 deaths Calcutta Feb 9 16 58 deaths Madras Feb 9 2_ 10 deaths Rangoon Feb 2 16 23 deaths

PLAGUE

Australia New South Wales Kempsey Jan 29 1 case 1 death Sydney Jan 19 Feb 2 12 cases 3 deaths Queensland Brisbane Jan 19 Feb 2 9 cases 4 deaths Port Douglas Jan 19 26 31 cases 1 death

Brazil Para Feb 23 March 9 11 cases 7 deaths, Rio de Janeiro Feb 10 March 3 9 cases 3 deaths

Chile Antofagasta Feb 25 10 cases 4 deaths

Egypt Assiout Province Feb 7 25 12 cases 10 deaths Ballana Province Feb 23 27 20 cases 16 deaths Beni Souef Province Feb 23-24 2 cases 1 death Ismailia, Feb 25-26 2 cases 2 deaths Girgeh Province Feb 8 27 7 cases 5 deaths Keneh Province Feb 26, 2 cases, 2 deaths Minieh Province Feb 25 27 8 cases, 1 death.

Formosa General Jan 1 31 165 cases 141 deaths

India General Feb 9 16 27 384 cases, 23 411 deaths Bombay Feb 12 26 384 deaths, Calcutta Feb 9 16 17 deaths Rangoon Feb. 2 16 105 deaths, Mauritius Jan 24-Feb 14 27 cases 18 deaths

Peru Chepen Feb 14 1 death Chiclayo 5 cases 4 deaths Cholseca 13 cases 6 deaths Lambayeque 3 cases 1 death Lima 2 cases Pacasmayo and San Pedro 3 cases, 3 deaths Trujillo 1 case Viru 3 cases 3 deaths.

Russia Cronstadt March 5 1 case 1 death (laboratory plague)

CHOLERA—INSULAR

Philippine Islands Manila Feb 2 9 10 cases 5 deaths

Marriages

PHILIP RICHARD TAYLOR, M.D, to Mrs P R Taylor, both of Louisville, Ky, March 19

JOSEPH C PLACAK M D to Miss Eunice Sabina Emde, both of Cleveland, Ohio, March 20

STEPHEN A HEMMI M D to Miss Helen Librenz, both of Chicago, at Springfield, March 23

BRUNO L SCHUSTER M.D to Miss Louise Kumz, both of Milwaukee, Wis, in Chicago, March 21

HARRY J MOSS M.D, Philadelphia to Miss Adeline E Grobwan of Woodbine, N J, March 17

KENNETH NOBLE, M.D to Mrs Berthia Z Schuenight both of Milan, Mich., at Monroe, Mich, February 28

LUCIUS F C GARVIN, M.D, formerly governor of Rhode Island, to Miss Sarah Emma Tomlinson, both of Lonsdale, R I, April 2

Deaths

Reed Brockway Bontecou, M.D Vermont Academy of Medicine, Castleton 1847, a member of the American Medical Association and delegate to the International Medical Congresses of 1887 and 1890, surgeon of the old Twenty fourth Regiment New York State Militia, since 1849, surgeon throughout the Civil War, serving first with the Second New York Volunteer Infantry and later as brigade surgeon of volunteers, on duty in the surgeon general's office Washington 1862, and afterward chief military officer of all hospitals at Beaufort N C in charge of the Haverford U S Army General Hospital, Washington from 1863 until its discontinuance in 1866 one of the most extensive contributors to the Medical and Surgical History of the War of the Rebellion, brevetted lieutenant colonel and colonel of volunteers in 1865 for faithful and meritorious service during the war, first surgeon of the Troy (N Y) Hospital, surgeon at the Marshall Sanitarium, Troy, since 1880 attending surgeon at the Watervliet Arsenal since 1870 who contributed much to medical literature and especially to military surgery said to be the originator and first to practice the application of photography to the history of military surgery as well as the first in this country and the second in the world to attempt to repair a typhoid perforation (in 1887) died at his home in Troy, N Y March 27 after an illness of one week aged 82

George G Wheelock, M.D College of Physicians and Surgeons in the City of New York 1864, for a year in charge of the Army General Hospital Savannah and later house surgeon at the New York Hospital formerly assistant demonstrator of anatomy lecturer on physical diagnosis trustee registrar of the board of trustees and treasurer of the alumni association of his alma mater later a trustee of Columbia University, manager of the Vanderbilt Clinic and president of the Sloane Maternity Hospital a trustee of the New York Dispensary, New York Institution for the Blind, Children's Aid Society, and president of the State Charity and Aid Association, died at his home in New York City, March 22, from heart disease, after an illness of two years, aged 68

Jerome B Thomas, M.D Jefferson Medical College Philadelphia, 1858, assistant surgeon of the Twenty fourth Illinois Volunteer Infantry, later surgeon in chief of the government hospitals at Bowling Green, Ky, and Gallatin, Tenn, afterward acting medical director on the staff of General Pain and, at the close of the Civil War, in charge of the Army General Hospital, Nashville, who practiced in Wyandotte, Kan, after the war, and since 1888 had been governor of the Central Branch of the National Soldiers' Home for Disabled Volunteer Soldiers, National Home, Dayton, Ohio, died at his residence, March 5, after an illness of four weeks, from heart disease, aged 71

William Carr Glasgow, M.D St Louis Medical College, 1869, a member of the state and county medical societies, professor of clinical medicine and laryngology in Washington University Medical Department president of the American Laryngological Society in 1890, fellow of the American Climatological Society, consulting physician on diseases of the throat and chest at the St. Louis City Hospital and the Martha Parsons Hospital for Children, died at his home in St Louis, March 22, from uremia, after an illness of two years, aged 62

Henry Root, M D New York University Medical College, 1859, of Whitehall, N Y, a member of the state and county medical societies and for 12 years secretary of the latter, a veteran of the Civil War, in which he served as surgeon of the Fifty fourth and Fifty eighth New York Volunteer Infantry and was brevetted lieutenant colonel, for several terms vice president of the Society of the Army of the Potomac, health officer of Whitehall for many years, died suddenly at Saratoga, March 20, from cerebral hemorrhage, aged 70

William D McCarthy, M.D Cooper Medical College, San Francisco, 1882, a member of the state and county medical societies, major and surgeon of the First California Infantry, U S V, during the Spanish American War, who served with that regiment in the Philippine Islands died at his home in San Francisco, March 15, from rheumatism, contracted in the service, after a long illness, aged 46

Hiram M Keyser, M D Rush Medical College Chicago, 1863, on duty at Camp Douglas, Chicago, in 1862 and 1863, receiving and disbursing agent for the territory of Montana in 1866 and 1867, representative to the Thirty fifth General Assembly of Illinois, for several terms mayor of Momence, Ill, died at his home in that city, January 24, from angina pectoris, aged 72

George Henry Van Wagner, M.D Albany (N Y) Medical College, 1881 a member of the state and county medical societies, at one time president of the county medical society, for many years health officer for the town of Poughkeepsie, and the village of Wappingers Falls, N Y, died at his home in Wappingers Falls, March 19, after a lingering illness, aged 55

Otto Albert Weigand, M.D College of Physicians and Surgeons in the City of New York, 1890, a member of the American Medical Association one of the best known young practitioners of Hudson County, N J died at his home in Hudson City N J March 23 from tuberculosis, after an illness of more than three months, aged 38

Amos J Jones, M.D College of Physicians and Surgeons Baltimore, 1868, a member of the state and county medical societies for four years a soldier in the Confederate service during the Civil War, and for the last four years health officer of Duplin County N C, died at his home in Kenansville, March 18 after a brief illness, aged 63

Thomas B Lacey, M.D Northwestern University Medical School, Chicago 1875 professor of surgery in the John A Creighton Medical College Omaha, and for more than 30 years a practitioner of Council Bluffs Iowa died at his home in that city March 25, from syringomyelia, after an illness of six years, aged 55

George Miller Hull, M.D Medical Department Omaha University, 1885, a member of the American Medical Association and secretary for many years of the Buffalo County Medical Association died at his home in Kearney, Neb February 27 after an illness of nearly a year, aged 43

James William Murfin, M.D St Louis [illegible] Col [illegible]
a member of the American Medical [illegible]
home in Vernon Ill., February 23 [illegible]
an operation for the removal of the [illegible]
illness of four days aged 51

Pemberton Dudley, M.D Homeopathic Medical College of Pennsylvania, Philadelphia, 1861, formerly dean of Hahnemann Medical College, died at his home in Philadelphia, March 25, as the result of injuries received in a street car accident in December last, aged 69

William B Irish, M.D Western Pennsylvania Medical College, Pittsburg, 1894, a member of the American Medical Association, and for 10 years a practitioner of Pittsburg, died at his home in that city March 22, from pneumonia, after an illness of six days, aged 36

Charles E McAdams, M.D Missouri Medical College, St Louis, 1869, a member of the state and county medical societies, of Wichita, Kan , for several years a councilman of that city, died suddenly in Kansas City, Mo , March 19, from heart disease, aged 61

Hezekiah D Fuller, M.D Albany (N Y) Medical College, 1879, a member of the state and county medical societies and of the Fox River Valley Medical Association, died at his home in Berlin, Wis , March 20, from uremia, after an illness of two days, aged 57

Harland S Boardman, M.D Homeopathic Hospital College, Cleveland, 1877, formerly president of the Vermont State Homeopathic Society, died at his home in Montpelier, March 21, from organic heart disease, after an illness of several years, aged 56

Owen Eugene McCarty, M.D Trinity Medical College, Toronto, 1890, a member of the American Medical Association, and a practitioner of Niagara Falls, N Y , since 1892, died at his home, March 25, after an illness of several months, aged 36

George Elmer Sanford, M.D University of Michigan, Department of Medicine and Surgery Ann Arbor 1875, a member of the state and county medical societies, died suddenly at his home in Saline, Mich , March 18, from heart disease, aged 56

Albert Fox, M.D Eclectic Medical College of the City of New York, 1871 once president of the Eclectic State Medical Association of New York died at his home in Waterbury, Conn , March 20, from senile debility, aged 81

George W Hunt, M.D Castleton (Vt) Medical College, 1854, dean of the medical profession of Sullivan County N H died at his home in Cornish Flat, N H March 3, from nephritis, after an illness of ten days, aged 77

Mary E Van Schoonhoven, M D University of Michigan, Department of Medicine and Surgery Ann Arbor, 1891, died at her home in Salt Lake City, Utah, March 20, from valvular heart disease, aged 64

Edward L Carpenter, M.D University of Louisville Medical Department, 1886 a school trustee of Louisville for two terms died at his home in that city, March 23, after an illness of several weeks, aged 41

Joseph Marshall, M.D St Louis Medical College, 1853, a veteran of the Civil War and for many years a practitioner of Normal, Ill , died at his home March 21, from dropsy, after a long illness, aged 74

Edward J Jenner, M.D Eclectic Medical Institute Cincinnati, 1878, formerly of Birds Ill , died suddenly at his country home near Lawrenceville Ill , from heart disease, March 22

Thomas W Davis, M.D Western Reserve University Medical College Cleveland, 1857 for half a century a practitioner of De Witt County, Ill died at his home in Wapella, March 16 aged 79

John J Hopkins, M.D New York University Medical College 1874, a surgeon in the Confederate service during the Civil War, died at his home in Upper Tract W Va , March 24 aged 65

Charles R. Brown, M.D New York Homeopathic Medical College and Hospital New York City, 1873 died suddenly at his stable in Lynn, Mass , March 21 from heart disease, aged 70

William L Linder, M.D Medical College of the State of South Carolina, Charleston 1900, was shot and instantly killed in his office, in Union S C , March 25, aged 29

William Steward, M D Bellevue Hospital Medical College, New York City, 1886 died in the Brooklyn Hospital from pneumonia, Dec 24, 1906, after an illness of one week

Charles F Morcom, M.D New York University Medical College, 1889, died at his home in New York City, March 23, from cirrhosis of the liver

Morris E Michel, M.D Medico Chirurgical College of Philadelphia 1893 died at his home in Pittsburg, Pa March 20, aged 62

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION Atlantic City, June 4 7

Tennessee State Medical Assn , Nashville April 9
Mississippi State Medical Association Gulfport, April 10
Medical Assn of State of Alabama Mobile, April 16
Florida Medical Association Tampa, April 17
Med Soc. of the State of California Del Monte April 16-18
Medical Association of Georgia, Savannah, April 17
South Carolina Medical Association, Bennettsville, April 17 19
Medical and Chir Faculty of Maryland, Baltimore, April 23 25
Am Confed Reciprocating Exam. & Lic. Med Bds Chicago Apr 30
Association of American Medical Colleges, Washington, May 6
American Therapeutic Society Washington May 4-7
Amer Assn of Genito-Urinary Surgeons Washington, May 7 9
Am Assn. of Pathologists and Bacteriologists, Washington May 7 9
Amer Climatological Association, Washington, May 7 9
American Gynecological Society Washington May 7 9
Amer Laryngological Association, Washington May 7 9
Amer Medico Psychological Association Washington May 7 9
American Ophthalmological Society Washington May 7 9
American Orthopedic Society Washington May 7 9
American Pediatric Society, Washington, May 7 9
American Assn of Physicians Washington May 7 9
American Surgical Association Washington May 7 9
Nebraska State Medical Association Lincoln May 7 9
Texas State Medical Association Mineral Wells May 7
Utah State Medical Association Salt Lake City May 7-8
New Mexico Medical Association Las Cruces, May 8-9
Kansas Medical Society Kansas City May 8 10

BOSTON MEDICAL LIBRARY MEETING

Held Feb 13, 1907

DR RICHARD C CABOT, Chairman

MEDICAL SUPERVISION OF SCHOOL CHILDREN

Physical Training in the Boston Public Schools

DR. JAMES B FITZGERALD said that gymnastics was introduced in the Boston schools in 1890 along the lines of Swedish gymnastics A director was elected in 1891, but this form of training has never been fully established in all the Boston schools It was proposed by the superintendent of schools in 1860, but failed to be approved by the school committee Enebuske's book was used, and, under the regular classroom teachers, exercises tried in school rooms, halls, etc. In 1899 Dr Fitzgerald became the director He found that some teachers are better in this line than others and wherever possible has this "departmental" arrangement. Instead of the book there are a set of graded cards devised by Hartvig Nisson, physical director of the schools in Brookline All exercises are at the word of command None are rhythmic or automatic There is no music There is a definite order for each day, including facing, heaving, stretching, balance, back, abdomen, jump and breathing in regular sequence Primary grades devote twelve minutes per day, and these exercises are more in the form of play Grammar grades exercise sixteen minutes each day and seek West Point ideals For purposes of play some simple gymnastic apparatus has been installed in ten of the school buildings There should be a special teacher of physical training for every grammar school district

The best work in physical training in the schools is done by the girls in the high schools They are required to spend two periods of forty five minutes each week in gymnastic work, and excellence counts several points in their records as scholars They need, however, to have medical examination

The high school boys do little because of the military drill It would be well if the schools were well rid of this Something has been done in the supervision of competing athletes however, and now all such competitors have a physical examination which certifies to their fitness There are two instructors in athletics In all the school athletes examined by the reader, he had found only one case of athlete's heart, no pulmonary tuberculosis and rarely any cardiac lesion Their legs are, however, usually much better developed than their

chests The department now has one director, four assistants and fifteen teachers It needs athletic fields and more teachers for boys

School Hygiene As It Is and As It Ought to Be.

Dr Samuel H Durgin said that during the more than 30 years that he has been a member of the Boston Board of Health there has been much progress in the hygiene of school buildings Thus privy vaults and cess pools are abolished. There are separate toilet bowls and wash bowls Basements are well lighted Fresh air is obtained for the school rooms by air shafts and the needed power Pupils are properly seated and not overcrowded Still much is needed in the way of new buildings, school play grounds, etc These matters are now in the hands of the school house commission, a very able body of men

In 1894 agents of the Board of Health, physicians, were appointed to daily inspect the schools Cases are referred to them by the teachers, diagnoses made, and the pupils either returned to the school room or sent home Advice is given as to the best care for the others who may have been exposed to a contagious disease Vaccinations are inspected and pediculosis detected Each medical inspector receives a daily bulletin of all cases of contagious disease reported in Boston during the previous day and is expected to attend to the isolation of such cases in their homes By examination of rashes and desquamations and cultures of throats and noses they determine when children shall be allowed to return to school Other cities have followed Boston in this medical school inspection, and now the State of Massachusetts has made it obligatory in all cities and towns There are many ways in which this inspection can be improved It should be aided by trained nurses All abnormalities should be detected, not only of sight and hearing Necessary treatment should be insisted on All exposed children should be followed up and examined The school nurse, already a success in New York City, is now assured for Boston

Physical Welfare of Public School Children.

Dr. S C Badger's paper was a preliminary report of a committee of five physicians appointed by the Boston School committee to study the lowest three grades They advise that artificial light be introduced into these school rooms and, when necessary because of dim light, schools should be dismissed For the same reason windows should be washed more often Two sessions are better than one. Recess in the afternoon should be longer and include more play In the late afternoon there should be games and manual training Grade I should be limited to 25 pupils, Grade II to 35, and Grade III to 45 Backward pupils should be studied by themselves School nurses are needed School yards should be open to the children after school hours and should have swings and such like apparatus, and when possible school gardens Pupils should be allowed to continue play on the school grounds and public playgrounds after the close of the afternoon session

As to medical inspection, the real inspection is done by the teachers and they vary in their skill and interest in this subject. It is desirable that the physician should observe all the children and not merely those referred to him by the teachers This inspection has not been of much importance

The work done seems to show that the public schools are not such great centers of infection as they have been thought to be

The school nurse will help greatly as will co operation by teachers The value of special examinations are indicated that in one building with 1,275 pupils where the eyesight was tested this last year, 10 per cent have been fitted to glasses The committee found the children generally well nourished and healthy, with but few cases of apparent neglect

Medical Supervision versus Medical Inspection.

Dr Thomas B Harrington maintained that the latter was not adequate Physician, teacher and parent must co-operate, and often do not, in order to fit the child and the curriculum Several foreign countries already have medical supervision of the schools, notably Austria and Japan This medical supervision must have due authority, and in many matters besides infectious diseases In this latter matter it would be better for the teacher to exclude suspicious cases and report to the board of health Their inspectors and nurses should then follow up the cases in their homes Something of this sort has already been done in New York City, and as a result, while in 1902 there were detected in the public schools 10,562 cases of contagious diseases, in 1903, with the new plan, only 1,001 were so sent home, others being detected in their homes or prevented by proper attention to the first case in the home

Medical supervision, on the other hand, is a much wider subject and includes a study of the physical and mental development of the child Not all grow equally All develop best in certain periods This the medical man must study and should control The school should be a continuation of the home and the home should be the strength of the school

DISCUSSION

George H Martin, secretary of the State Board of Education, told of the effort being made to interpret practically the words of the new law which require that "each child shall be examined annually for any defect or disability which may interfere with school work" Governor Guild asked a committee consisting of three members of the State Board of Health, three members of the State Board of Education, and three prominent physicians to consider the matter and report a plan They appointed a subcommittee consisting of Dr Robert W Lovett, Dr Charles Harrington, and Mr Martin to prepare a circular to be sent to the medical inspectors throughout the state to secure uniform intelligent inspection Conferences were held with specialists of all kinds and they were asked what defects they would expect to meet among school children, and the indications As it was found that practically, in most places in the state this inspection must be made by the teachers, these specialists were asked to each prepare a brief, simple statement This material was then gathered and arranged by the committee, and is now being printed This circular, signed by those experts who are authority for its statements, will go to every teacher and medical inspector in the state, and is likely to form a most efficient aid

Dr. Arthur C Jelly told of his work among the backward scholars Graded classes are for the average pupil For many years there have been "ungraded" classes for the backward pupils, and now there are seventy such classes in Boston The same methods are employed as in the graded classes, the object being to coach them in some special lines, e g, foreign born, frequently ill, slow developing, irregularly developing, deaf, partially blind, poorly nourished, or mentally deficient children

In 1898 three classes were started especially for these, and in 1902, when Dr Jelly took charge, four more such classes were established There are 15 children in each, or 105 in all At first they were chosen by the teachers, and lowest types were so separated These were not capable of doing anything and the service was thrown away Now the effort is made to induce parents to send such children to the School for Feeble Minded at Waverly This gives a chance for the admission to these special classes of less extreme types, and often these can be so helped by the special training that they are able to return to the regular graded classes It is thus possible to instruct the teachers and less obvious defects are now noticed by them and remedied More such special classes are needed

Dr. Joel E Goldthwaite said that the school system in Boston is broadly a great success The problems are varied With 40,000 pupils in the lowest three grades the only surprise is that the curriculum so well meets their varied conditions Physicians must be careful not to condemn the system because of a few isolated examples of faults which come to their individual notice Doubtless a much better system can be developed, but meanwhile be temperate and helpful in criticisms The school committee and the teachers are remarkably efficient, and all suggestions of the committee were well received

Dr. William H. Potter said caries of the teeth is one of the most common defects among children It disables insidiously, affecting mastication digestion, nutrition weight. Of 700 pupils examined in one building in Brooklyn this past year, 50 per cent. had poor teeth, 25 per cent fair teeth and 25 per cent good teeth, by this being meant teeth which had no readily observable defects"

DR CHARLES PUTNAM said that the nearly 500 boys who are sent by the courts to the parental school at Roxbury, or to the Rainsford Island in Boston Harbor and put under the care of the trustees for children, all of them, nearly 500, have the benefit of regular examinations of teeth, sight and hearing Surely it is proper that children who are not bad should have the same privileges

MR. JOSEPH LEE, of the Civic League, told of two bills now before the legislature, one to combine the public baths, gymnasiums and playgrounds under one paid commissioner to be appointed by the mayor, with the advice and consent of the aldermen This he opposed as not being practicable or likely to benefit the children The other is to put the playgrounds and outdoor gymnasiums, as well as the public school yards, under the control of the school committee This is based on the idea that they can and should care for the physical as well as the mental well being of the children Boston has playgrounds valued at $4,000,000, and appropriates $50,000 annually for their maintenance Results are now being obtained Supervision is needed. Men and big boys monopolize the spaces for baseball, etc Children dare not go there There are not many professional playground directors The school committee is already in the business The best teachers outdoors are those who teach indoors One of the best places to determine a child's mental ability is while at his play Such a man of the right character can get out all the scholars and not merely those who are proficient

Attention was called to the International Congress of School Hygiene to be held in London, England, Aug 4-9, 1907

NEW YORK ACADEMY OF MEDICINE

Regular Meeting, held March 7, 1907

The President, DR JOHN A WYETH, in the Chair

SYMPOSIUM ON TYPHOID FEVER.

The Typhoid Epidemic in Berwick, Pa.

DR J H BOWMAN, Berwick, said that for two winters in succession Berwick has been visted by an epidemic of typhoid fever In the winter of 1906 7 the epidemic began in October, and new cases were reported until Jan 1, 1907 The total number of cases to March 1 was 114, with 9 fatalities. Berwick and its vicinity has a population of 15,000 and is dependent for its water supply on the Susquehanna River and several mountain streams It is situated 41 miles below Scranton The sewage of Scranton, as well as that of Wilkes barre and Pittston, empties into the Susquehanna River Soon after the outbreak of typhoid the water was turned off from the river and was not turned on again until February 15 An examination of the water from all sources has been made, but the presence of typhoid bacillus can not be demonstrated An inspection of the water sheds has also failed to reveal the source of the infection The dairies have likewise failed to show the cause of the outbreak Dr Bowman concludes that the water was responsible for the epidemic and that the river probably caused the first cases and that these cases infected the mountain streams

The Typhoid Epidemic in Pittsburg

DR J F EDWARDS Pittsburg said that typhoid fever has been present continuously in Pittsburg since 1873, or during the entire period of available statistics Certain years or groups of years show higher percentages than others, but the mortality has always been high as compared with other American cities The average mortality from 1880 to 1906 was 107 per 100,000 population The lowest rate was 55 per 100 000 in 1894 and the highest 158 per 100,000 in 1882 It is evident that a predominant etiologic factor is at work continuously, but with varying intensity The present high rate period began in 1899 The predominant cause was an infected water supply, although other agencies and conditions were also at work The general water supply of the city is drawn from two intakes in the Monongahela River and two in the Allegheny River, the water is pumped directly into reservoirs and distributed to the people Several wards in the city are supplied by corporations one having its intake about a mile farther up the river than that of the city supply There is said to be some filtration here by means of a crib in the river bed One ward is supplied by a corporation which has its intake farther up the Monongahela River than the others and has installed an infiltration plant This ward is at present practically free from typhoid fever. Both rivers have a large population in towns on the water's edge There are larger towns along the Monongahela than along the Allegheny, and one would expect more typhoid in the portions of the city supplied by that river, but this is not the case The Monongahela has a slow current and in low water stages is said to be pumped out and put back five or six times during its course One of these times it must run back through the sewers of a town

The mines and mills along the river introduce acid enough into the water to render it acid during low water Five parts of sulphuric acid to 100,000 parts of water is fatal to typhoid germs in one and one-half hours The river reaches a much higher percentage than this The objection to this theory is that the river is alkaline during a greater part of the year and typhoid fever was prevalent in August when the water was low The heating of large quantities of water by manufacturing plants along the course of the river also acts as a corrigent Four large establishments pump 178,000,000 gallons per day and heat five and three-quarter millions gallons Many others also use large amounts and return it in a sterile condition. During the winter 1905 6 typhoid prevailed in a number of boroughs above Pittsburg on the Allegheny and the March thaw probably accounts for the large increase in the number of cases reported during the month of April No considerable number of cases could be traced to the milk supply Since July, 1905, there has been a progressive increase in the number of cases, and during the year 1906 there were 5,729 cases with 508 deaths

In general, it may be stated that typhoid fever was more prevalent in those districts where the standard of living is lowest This class of people are less likely to boil the water and there are greater opportunities for contact infection A large percentage of cases occurred among immigrants from Austria Hungary, Russia and Italy A municipal filtration plant is now near completion, and it is hoped that this will greatly diminish the ravages of this disease, which destroys on an average 300 of the most productive part of the population each year The action of the state looking toward the prevention of pollution of streams throughout the state holds another promise of relief

The Typhoid Epidemic at Scranton

DR J M WAINWRIGHT, Scranton, said that while reliable morbidity reports are not at hand, and while the disease has been constantly present in that city, it has not prevailed to any great extent as compared with other American cities The fall rise in Scranton has not been nearly as great as in other cities The sudden onset of the epidemic points to some sudden and large pollution of the water A map showing the Scranton water supply, the larger part of which came from the Elmhurst reservoir, shows that the principal tributary of the Elmhurst reservoir was Roaring Brook which ran through Moscow, a village of about 800 inhabitants, and also through a hamlet of about 200 inhabitants Until last September the water from the Elmhurst reservoir was delivered over a spillway and allowed to run several miles into a storage reservoir This reservoir was abut 2,000 feet in length and the water displaced itself in every two to four days A railroad runs near the brook and also one on either side of the Elmhurst reservoir In the latter part of September the water was piped directly from the Elmhurst reservoir to the city cutting out reservoir The water was taken from near the bottom of the reservoir instead of over the spillway

During the first week in December, 11 cases of typhoid fever were reported this time suggested close connection with a heavy snowstorm on November 15, followed by warm rains, so that it was probable that a fecal accumulation was washed suddenly into the water Considering the epidemic to have extended over December, January and February there were 1,155 cases reported and 111 deaths The map of the city shows very strikingly that the distribution of the cases corresponds with the Elmhurst water supply In portions of the

city having another water supply there were only 28 cases, and these were persons who were employed or who visited frequently in that part of the city supplied by the Elmhurst reservoir After a painstaking search of the entire water shed by both city and state authorities, the origin of the infection could not be located, this was probably due to the multiplicity of possibilities

Dr Wainwright drew the following conclusions from this epidemic 1 All cases of typhoid fever ought to be reported promptly, as when this is neglected grave danger signs often pass unnoticed 2 Municipal ownership was an advantage, as it eliminated the harm that a private corporation can do during an epidemic in its effort to guard the capital stock at the expense of disaster to the people. 3 The numerous nuisances that have been sustained along this water shed demonstrated the necessity of rigid police inspection of the entire water shed by inspectors employed by and for the people and not by the water company 4 Frequent bacteriologic and chemical examinations of the water are another safeguard 5 In times of epidemic the water supply should be changed, if possible. The necessity of boiling water and milk should be hammered into the people, and all possible precautions should be taken to protect the milk supply The spread from individual cases should be prevented by visiting nurses, circulars of instruction and the free distribution of some *one* effective antiseptic Too many antiseptics confuse people. 6 Typhoid fever is to a very great degree a directly communicable disease. 7 Physicians and sanitarians must recover from their habit of speaking of a certain number of cases of typhoid fever as normal, because typhoid is caused by imbibing more or less directly the feces of a sick man The only normal for a civilized community is no case at all

Bacteriology of the Blood in Typhoid Fever

Dr Warren Coleman said that up to 1904, 75 per cent. of typhoid patients whose blood was examined revealed the presence of the typhoid bacillus Broths were used in the earlier experiments, but the method now used is to take 90 c c of ox bile, 10 c c glycerin and 2 grams of peptone The mixture is distributed in small flasks, containing 20 c c. each and is sterilized Three of these flasks are used for every examination and about 3 c c of blood is run into each The flasks are then incubated until the following morning, when streaks are made from each over the surface of a litmus lactose-agar plate If the micro organisms are present they may be observed in five or six hours If the growth does not redden the medium and the bacillus is found to be one resembling typhoid, the Widal reaction with immune serum is applied In this way one can determine within twenty four hours whether a case is one of typhoid

Since using the ox bile method a much larger percentage of positive results has been obtained, in fact, the results now obtained show that the bacillus is present in the blood in practically all cases of typhoid fever Out of 224 examinations in the first week of the disease, 200, or 89 per cent, were positive. Of 484 examinations made in the second week of the disease, 353, or 73 per cent, were positive, of 268 examinations made in the third week, 178, or 60 per cent were positive, of 103 examinations made in the fourth week, exclusive of relapses, 15 or 26 per cent were positive Therefore, the percentage of positive results is greatest in the first week of the disease and thereafter steadily declines This does not indicate that the bacillus has disappeared from the blood in negative cases, but points to a diminishing number of bacilli, whose presence imperfect methods fail to reveal

From investigations in regard to the absorption of the bacilli from the peritoneum and from the fact that the lymph nodes and spleen contain such enormous numbers of bacilli, it may be concluded that in typhoid fever the bacillus first finds its way from the alimentary tract to the lymphopoetic system, including the spleen, where it is developed chiefly and from whence it finds its way into the blood stream It seems doubtful whether the bacillus multiplies in the blood, its presence means simply an overflow from the lymph organs The presence of typhoid bacilli in the blood consequently does not constitute a true septicemia The destruction of the bacilli proceeds most rapidly in the blood, and hence the disease is caused by the destruction of vast numbers of bacilli in the blood with the liberation of their endotoxins It is accordingly irrational to believe that the course of the disease can be affected by intestinal antiseptics, because after the invasion of the body proper by the bacillus the battle ground shifts from the intestine to the blood.

There appears to be a definite relation in the evolution of typhoid fever between the symptoms and the bacillemia The intensity of symptoms in the early stages of the disease corresponds to the active growth of the bacilli They invade the blood stream in increasing numbers and are there destroyed. Then comes the stationary period when the ratio or growth and destruction appear to be uniform The steep curve period corresponds to the diminishing bacillemia and defervescence to complete disappearance of the bacilli from the blood. Degenerative changes occur only in the presence of active growth and destruction of the bacilli. Relapses are probably caused by the persistence of some bacilli in the body and not by reinfection The bacillemia apparently bears no relation to the type or severity of the disease, except as regards the number of bacilli The bacilli are found in the blood with the same persistence in the mild as in the severe cases, and in the cases of short as well as in those of long duration The definite establishment of the nature of these short duration cases would be of immense value from the epidemiologic standpoint

A bacteriologic examination of the blood in 33 cases of relapse resulted in the recovery of the bacillus in 90 per cent of the cases

DISCUSSION

Dr. Morris Manges, in speaking of the direct infection of one subject by another, told of the case of a woman baker in Germany All those who ate her bread developed typhoid fever The typhoid bacillus was found in her feces, and inasmuch as she used the same toilet and prepared the food for the others who contracted the disease, the source of infection was not hard to find He cited another case of a woman who had some intestinal trouble and fed only on a beef diet Her cook had a slight diarrhea, but the feces contained a number of spirillæ, thus showing the source of infection It is difficult to find the foci of infection after the epidemic has passed away The fact that the acidity of the river water in Pittsburg failed to do away with the typhoid germs shows how fallacious is the antiseptic action of the gastric juice on typhoid bacilli He called special attention to the fallaciousness of statistics in small towns

Dr Sedgewick said that the summary of infection is Food, fingers and flies

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Medical Education and State Boards of Registration

COMING EXAMINATIONS

Arkansas State Medical Board Little Rock April 9 Secretary, Dr F T Murphy Brinkley

Arkansas Homeopathic Medical Board Little Rock April 9 Secretary Dr V H Hallman Hot Springs

West Virginia State Board of Health Wheeling, April 9 11 Secretary H A Barbee Point Pleasant.

District of Columbia Board of Supervisors in Medicine Washington April 12 Secretary Dr Geo C Oper Washington

California State Board of Medical Examiners San Francisco April 16 Secretary Dr Chas L Tisdale San Francisco Cal

Missouri State Board of Health St Louis and Kansas City, April 16-18 Secretary Dr J A B Adcock Warrensburg

Illinois State Board of Health Great Northern Hotel Chicago April 17 19 Secretary Dr J A Egan Springfield

Kentucky State Board of Health City Hall Louisville April 23 Secretary Dr J N McCormack Bowling Green

Georgia Regular Board of Medical Examiners Capitol Building Atlanta April 30 May 1 Secretary Dr E R Anthony Griffin

Texas State Board of Medical Examiners, Austin April 30 May 2 Secretary Dr T T Jackson San Antonio

Texas Eclectic Medical Board Dallas about April 25 Secretary, Dr L S Downs Galveston

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Rules for Conducting Examinations in California—The following set of rules governing examinations for license to practice medicine in California were compiled by Dr J C King, ex president of the Board of Medical Examiners of that state:

1 Regular meetings of the Board of Medical Examiners of the State of California will be held on the first Tuesday of each April, August and December Examinations will be held on the third Tuesday of each June, September and December, unless otherwise ordered by the board. Only necessary routine business may be transacted at any meeting held on a first Tuesday of any month

2 The deliberations of this board shall be governed by Robert's Rules of Order, so far as they do not conflict with the state law under which this board is organized, nor with other rules adopted by this board.

3 Any motion to add to, rescind, alter or suspend these rules or any part thereof, shall be submitted to the committee on rules without debate On the favorable report of the committee, said motion shall be put before the board for action, but, if adopted, shall not become operative until the next regular meeting

4 There shall be three standing committees, to wit One of three members, on rules, one, of three members, on credentials of applicants, one, of two members, on auditing of accounts

5 In determining the standard grammar and high schools, academies, colleges (other than medical) and universities, the opinion of the recorder or of the credential committee of the University of California shall be taken as a guide by this board

6 As applications are received, the secretary shall immediately place at the disposal of the committee on credentials all documents relating to each and every new applicant This committee shall, on the first day of each regular meeting, report to the secretary the result of their investigation The secretary shall thereon, within twenty four hours, mail to the address of each applicant a permit to take the examination, or, in lieu of such a permit, a statement showing in what respect the credentials and documents of the applicant are incomplete or defective, together with notice that said applicant may appeal, in person or by attorney, to the full board at its next meeting, specifying date and hour

7 An adjourned meeting of the board shall be held in San Francisco at 9 a m, on the day on which each examination shall begin Prior to this meeting the committee on credentials shall present to the board, and to each individual member thereof, a formal, complete and typewritten report This report shall include a list of the names of applicants to whom permits to take the examination shall have been issued, it shall specify, as regards each applicant individually, the reason why his or her credentials or documents, or any part thereof, shall have been deemed incomplete or defective by said committee Thereon, any applicant to whom a permit shall have n refused or not issued, may appear before the board, in on or by counsel, and may present an amendment to his her credentials or documents, or may appeal to the board om the decision of the committee In case the amendment is accepted or the appeal sustained by the board, the secretary shall at once issue a permit to said applicant.

8 Immediately befor an examination begins, a numbered envelope will be handed to each applicant. In this envelope the applicant shall insert his permit, after having signed his name and written his address on said permit, and shall then seal the envelope Said envelope shall then be returned to the custody of the secretary and shall not be opened until all the markings connected with that examination shall have been completed and then only in the presence of the board The number of the envelope shall become the number of the applicant whose name shall have been inserted therein Each applicant shall remember his or her number and shall inscribe it, in plain figures, on the exterior of each set of examination papers No other mark shall be placed on any paper whereby the identity of the applicant may be discovered

9 Each member of the board, to whom a subject for examination shall have been allotted, shall prepare a list of questions, at least ten of which must be answered by each applicant

10 All questions must be written with ink, in English

11 Each question shall be graded and marked separately on a scale of 1 to 10, in plain figures in ink, on the margin of the examination paper The total attained shall then be computed and marked on the exterior of said paper

12 Each of the following, when made a part of any examination, shall constitute one question (a) Identification of microscopic preparations (b) identification of gross pathologic preparations (c) clinical examination of patients, (d) any other practical work In all such cases questions must be answered in writing as a part of the examination paper, in order that the identity of the applicant may not be revealed to the examiner

13 No oral, clinical or other form of examination shall be conducted in a manner that will permit the applicant to reveal the identity of his or her number to an examiner, or to any other person

14 During an examination no applicant shall consult, or open for inspection, any book, notes or other aids to memory, hold any communication with any other applicant, smoke tobacco, leave the room prior to the completion of his paper, unless accompanied by a member of the board, or by an inspector appointed by the board, create any unnecessary noise or disturbance, introduce into the room any visitor or friend Violation of this rule will be punished by exclusion from the examination

15 Two hours shall be allowed for the completion of papers on each subject

16 On its completion, each examination paper shall be deposited by the writer thereof, in a ballot box to be provided for that purpose by the secretary No examiner nor other person shall be permitted to handle or to inspect any such paper until after its removal from said box No paper shall be removed from said box until after all papers relating to the same subject shall have been deposited therein, and then only by a member of the board Each applicant is absolutely forbidden to reveal the identity of his or her number to any examiner, or to any other person, under penalty, if discovered, of summary rejection

17 Each examiner shall be responsible for the removal from the ballot of all papers relating to the subject allotted to him, for the correct marking of the same, and for the delivery of the same to the secretary before 10 o'clock a m, of the day next succeeding the last examination

18 Section 1 On the day following the last day of examination the secretary shall record on a chart prepared for the purpose the number of each envelope, and beneath that number the markings attained in each subject by the examination papers correspondingly numbered

Sec. 2 The numbers showing an average work of not less than 75 per cent, and also a mark of not less than 60 per cent on any one subject, shall be deemed to have passed the examination

Sec 3 When it appears that any number has attained an average of at least 75 per cent, and yet has failed to attain at least 60 per cent on any one or more subjects, then the board shall review papers so numbered, so far as they relate to defective subjects, and shall, by vote, re mark each answer thereof, and the result arrived at by the board shall be inserted on the chart, instead of the original marking

Sec 4 All numbers which shall finally appear to have attained an average of less than 75 per cent, or which shall have attained less than 60 per cent on any one or more subjects, shall be deemed to have failed

Sec 5 The numbered envelopes shall then be opened and the name on the permit contained therein shall be attached to the numbers on the chart corresponding to the numbers on the envelopes, thus determining the identity of each applicant

Sec. 6 After the numbered envelopes shall have been opened, no change whatever shall be made in the markings or their result, except as hereinafter specified

19 Within three days after the success or failure of applicants shall have been determined, the secretary shall send, by express or otherwise, to the address of each successful applicant, a license, properly signed and sealed, to practice medicine and surgery in the State of California And he shall send, by mail, to the address of each unsuccessful applicant a statement showing his or her markings in each subject.

20 Applicants for reëxamination must, not later than the first Tuesday of any April, August or December, following the legal interval after their last examination, make application to the secretary for a permit, in the form prescribed for the first examination and accompanied by the same fee, except that no credentials need accompany the application The secretary shall thereon issue to such applicants permits to take the next ensuing examination

21 On the last day of each examination the secretary shall return to each applicant at the examination, his or her diploma and other documents, taking therefor a receipt from each specifying all documents delivered.

22 Any clerical error in computing the results of the markings may be corrected at any time by the secretary But such correction must be reported to the board at its next session

23 At the meetings in each April, August and December the secretary and treasurer shall present a complete report of receipts and expenditures, which shall be referred to the auditing committee.

Miscellany

An Advertising Quack Wants a Helper

The following advertisement appeared recently in a Chicago evening paper

MALE HELP WANTED

DOCTOR SINGLE REGISTERED IN PENNSYLvania, wanted in a Philadelphia advertising office by April 10, must be first-class casetaker, strictly sober, good letter composer typewriter put up prescriptions hours 9 4 6-9 Sundays, 9-2 steady man willing to sign five year contract should send photo highest references or security wages to start, $840 yearly no board or lodging Doctor 204 2d st. Miami Fla, send full particulars

An answer to it brought forth the literary gem here appended

MIAMI FLA., Feb 26 1907

Dear Sir —Yours to hand and in reply will say that I am a well known specialist in Philadelphia and my labratory (sic) contains actual fact over 3 to 4 000 different drugs and they are used and not for show I am the only physician who positively cures Syphilis, Bright s Disease, Diabetis Mellitus Kidney and Bladder Disease and Cancers, if I can get at it. Psoriasis Heart Liver Rheumatism Piles all kinds Bronchitis Malaria, Endwated (?) Scrofulatic Glands Shingles, etc, Spermatorrhea, Impotence and all other curable cases

Whereas I am an old man, hence I must have an honest man who loves medicines and who is not lazy and who tries to follow my method, the Eclectic, Homeopathic Allopathic, Botanic. My drugs are very expensive by the combination, and hence a physician must be able to make the patient understand that he gets cured that we don t give mercury, calomel saltz etc., but we combine from 12 to 60 drugs and still they do not effect the stomach I cure Syphilis and I don t care how dangerous cases are but the cost for each mild case $285 00 Well we have to get from $350 00 to $500 00 and in dangerous cases the drugs cost between $350 00 to $500 00 and for those cases $750 00 to $1 000 00 is not too much I am no fakir I mean just what I claim, and the most expensive treatment and work has to be done in the first three months, and therefore patients have to pay all or a great deal of amount down and I have proof of all I claim. Now then I need an honest man who will work All he has to be is a good diagnostician and then study up the cases and then prescribe according to my ℞

How are you as a good case taker? That is to take the patients who have the money? To pay my expenses it takes monthly $2 450 00 now you see that the money has to come in Now honesty and a good case taker is everything Then above all a man has to be strictly sober Then if not sober he can do no business A man has to start in with $840 00 the first year without board or $600 00 and board, but as I said if he is a good man and can increase the income he gets more. If he is not a good case taker, of course I don t want him not even for his board I am an old man and as I said I need and honest man Of course you would have to sign a contract for five years with a provision that if you are not capable to fill the bill I can discharge you Then it must be to you as reasonable as possible That if you are not a good case taker and not able to follow my method I could not keep you I am sure a good case taker alone would not amount to much If the man is not able to cure you know as well as I do that if you could only take the money and not cure the people will say Oh that s a beat and my office would soon go to H——

Now please be kind enough to send me your photograph I generally can have an opinion from the expression of the man s face. Consider this well Hours 9 to 4 evenings from 6 to 8, Wednesdays and Saturday from 6 to 9 Sundays from 9 to 2.

You have to put up all your own ℞ you must see to everything if I am not at home, you to write with machine and dictate a good letter The composing of these letters is in itself very important. Of course you will also have to sign in the contract that you have never been in my employ and you never have a right to copy my prescriptions or to take addresses or names of patients nor to open an office in Philadelphia or associate yourself with any one else or say I was formerly with so and so using my name nor can you practice outside of my office while in my employ and you must be registered in Pennsylvania without fail

The position is a good steady one for the right man in the right place state the age nationality and what college you graduated from In fact to avoid unnecessary correspondence and time send highest references not from friends and patients but from honorable citizens who know your good as well as your faults

Yours faithfully

As the name of the individual who signed this remarkable effort was not to be found in any of the medical directories, further information was asked for, regarding the legal hability of the assistant The reply defined the status of the assistant with clearness Here it is

MIAMI FLA. March 5 1907

Dear Doctor —My uncle for whom I write is Registered since 80 in Philadelphia and has practiced since 38 years in Philadelphia Of course you are responsible as far as Patients goes if you poison any but otherwise no Patient is taken without a Contract that relieves you and my uncle cure or no cure. Now what Uncle wants is a Honest Man strictly sober good talker a Man who will not take a Penny nor Hundreds but who Truly is Honest & of course Uncle Trusts none until he finds him Honest & so long will set Trapp to find it out If you are the right man you get a good Place if you are N G as I wrote before you re not worth a Penny to Uncle & if you are the right Man you will get your wages increased but don t Expect it in a Month or 3 You must show your value first & not Expect the Earth or after you find out you are the right Person say here I want the Earth My uncle is O K all he wants is the Right Man Send Photo & Ref He has to decide quickly as my Cousin now takes care of office but my cousin is this Kind of a fellow He knows that he can run the office & wants the Earth hence Uncle has to make a change

Answer and act quick

One more letter, thanking the nephew for his services as employment agent and suggesting that he send his uncle's name and address so that further correspondence might be carried on direct failed to elicit a reply

Whether the doctor was able to get the honest man who didn't want "the earth" to take charge of his evidently lucrative practice and at the same time to fulfil the somewhat exacting requirements, all for the munificent sum of $70 monthly, we know not

Venesection in Acute Nephritis.—Baccelli treats acute nephritis by withdrawing 200 c c. of blood from a vein in the foot In a typical case described in the *Policlinico*, xiv, 18, 1907, the edema of the lids, fever, blood, albumin and casts in the urine indicated severe nephritis a few days after the first stormy onset. The trouble in the kidneys causes lower arterial pressure with increased venous stasis and thrombosis in the finer ramifications of the veins with the glomeruli compressed and paralyzed Venesection relieves these conditions as if by magic, and Nature then has a chance to heal In the severer cases he follows the venesection with powders containing sodium sulphate, sodium nitrate and scammony, every five minutes This stimulates the emunctories very powerfully, but the venesection alone generally aborts the nephritis and prevents its transformation into a chronic phase In the severe acute case described the venesection was repeated the second day and recovery was soon complete

DEDICATION OF THE BARLOW MEDICAL LIBRARY OF LOS ANGELES

George H Kress, M.D
LOS ANGELES

The establishment of medical libraries is so desirable a need of the medical profession and at the same time so unusual an event, that every such occasion seems worthy of special mention and record It is, therefore, with considerable pride that Los Angeles, now a city of 260,000 persons, and the metropolis and natural geographical, financial, social and literary center of that wonderful region known as "The Great Southwest," is able to announce to the world that the medical profession of that section has come into possession of a fire proof medical library building and equipment costing more than thirty thousand dollars and that the institution starts its career of active work with more than five thousand volumes and publications

For the generous gift of the building and equipment the medical profession is indebted to one of its own members, in fact to one of the younger members of the profession of Los Angeles—Dr W Jarvis Barlow, who occupies the chair of clinical medicine in the College of Medicine of the University of Southern California. Dr Barlow gave the building without any restrictions, but in his honor it has been called the Barlow Medical Library by the board of trustees, who were elected by the members The books with which the institution starts constituted the former library of the College of Medicine of the University of Southern California The control of the institution is in the hands of the patron members, these being physicians who subscribe twenty five dollars annually As yet there is no endowment and the salary of the librarian and the expense of publications come from dues of patron members, annual members (ten dollars yearly) and of associate members (five dollars yearly)

The building has been erected within eight minutes' distance of the center of Los Angeles, opposite the buildings of the College of Medicine, so that it is accessible both to physicians and to the medical students of the city The structure itself is virtually a single mass of cement, the architecture being dignified and handsome and the color tones most pleasing. In

addition to the general reading room there are a number of research rooms where physicians carrying on special investigations may leave books and papers without fear of having them disturbed. Light, ventilation and heating arrangements are most excellent

The influence which this institution will have on the scientific tone and culture of the medical profession of the Southwest is inestimable That it will be great and that its effects will be far reaching is not to be doubted In conjunction with the Los Angeles County Medical Association, an organization that now holds weekly city meetings, in addition to maintaining sections in the specialties as well as supporting three branches in

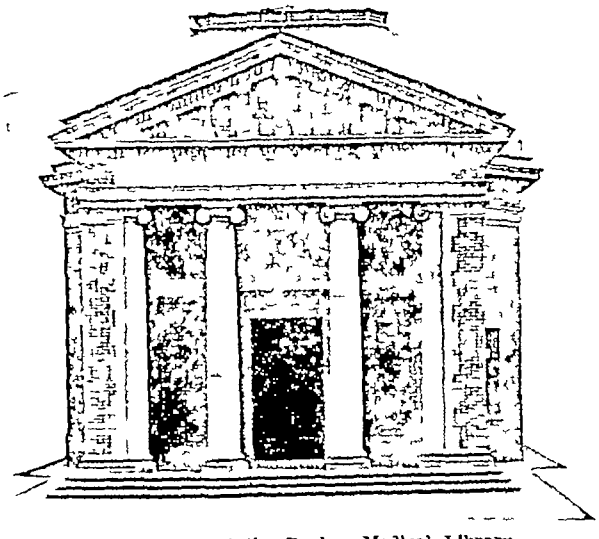

Fig 1—Front view of the Barlow Medical Library

near by towns, the Barlow Medical Library is bound to be a potent factor in the development of scientific progress and in the organization of the medical profession of the Southwest. The Los Angeles profession is grateful because of this new library and proud of the generosity displayed by one of its members in making this institution a reality

An appeal is herewith made to medical librarians and to members of the profession elsewhere to aid in the work of increasing volumes and publications now on the shelves of the in

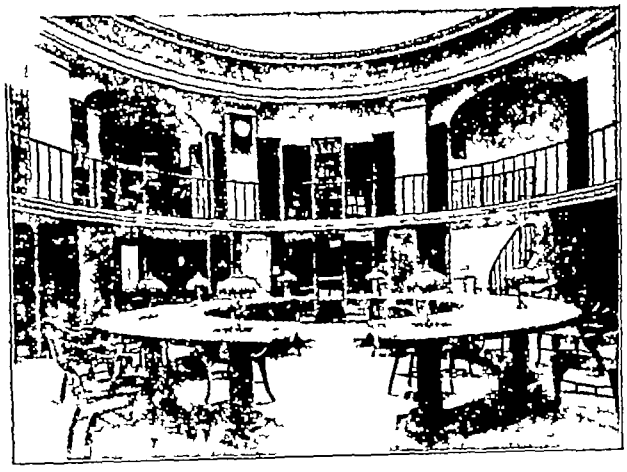

Fig 2—Interior view of the Barlow Medical Library

stitution Medical publications of any kind and reprints of medical articles will be gladly received. Lists of books or reprints may be sent to the librarian of the Barlow Medical Library, 740 Buena Vista street, Los Angeles, who will be glad to give detailed information concerning the needs of the institution

The first board of trustees elected by the patron members consists of Dr Milbank Johnson president Dr Stanley P Black, secretary, and Drs George L Cole William A Edwards B F Church, John R Haynes and Fitch C Mattison These men, on behalf of their fellow practitioners of the Southwest, request the cooperation and aid of the profession of other parts of the country in the work of which they are the custodians

Tumors of Cerebellum and Posterior Cranial Fossæ.—The *Med Klinik* publishes with its first number in 1907 a supplement containing an article by W Seiffer presenting the present status of our knowledge on this subject. He explains the contradictory findings of various investigators as due to the more or less gradual development of the tumor Of all the organs in the body the cerebellum seems to be able to benefit most from compensatory processes A tumor developing slowly in the cerebellum exhibits entirely different symptoms from one that develops rapidly, without time for the compensating processes to be established He urges careful record of the consequences of surgical treatment of such a tumor Every operation of the kind is not only a life-saving measure, but is a most important contribution to the progress of science The inoperable intrapontine tumors seldom cause choked disc or much headache, but spastic hemiparesis with exaggeration of the reflexes and Babinski's sign are frequent, also alternating hemiplegia, that is, paralysis of one or more of the cranial nerves on one side and of the extremities on the other There is, further, frequently a total and permanent ophthalmoplegia (which is not total with tumors of the cerebellum), or bilateral spastic paresis of the extremities, sphincter disturbances (seldom observed with cerebellar tumors), eventually also hemitremor and hemianesthesia Spitzer regards conjugated deviation of the head and eyes toward the sound side as the chief sign of an affection of the pons

Cost Increases with Purity—The argument that enforcement of the laws regulating the purity of milk will result in increased cost of the product to the consumer is not a valid one The price is being advanced anyway The law of supply and demand will settle that question, as it does all others in domestic and political economy—*Louisville Monthly Journal of Medicine and Surgery*

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every-day practice Contributions will be welcomed from our readers]

Alopecia.

McKee, in the *Lancet Clinic*, states that the first step is to cleanse the scalp and to remove some of the inflammatory exudates The next step is to apply some antiseptic medication which should not only cover the scalp, but also penetrate into the hair follicles Through this cleansing process and disinfecting the natural oil of the scalp will be removed and the third step consists in replacing it Vaselin or lanolin in which some antiseptic has been incorporated is rubbed into the scalp daily for from one to six weeks, then every other day for a similar time, then twice a week, and then once a week.

Chrysarobin is one of the best remedies in this condition It is best appplied in 6 per cent ointment with vaselin or lanolin as a base It is applied daily for a week or two, then discontinued to see if the progress of the disease has been checked If lanugo hairs do not appear, or if the hairs in the periphery of the patch can be pulled out easily the treatment should be resumed This remedy should not be used near the eyes The author asserts that lactic acid, 50 per cent in water or alcohol, gives good results The affected parts are first freed from oil with alcohol or ether, then the remedy is applied on a swab till the skin becomes red The following combination is useful

℞	Thymolis	ʒss	15
	Olei ricini		
	Olei amygdalæ dul, āā	℥ii	60
M Sig	Appply to the scalp		

As recovery is often spontaneous, it is difficult to determine the exact value of the remedies used Internally, arsenic, cod liver oil and similar tonics should be given when indicated, in connection with regulation of the diet and physical and mental hygiene To prevent baldness the following may be used

℞ Pilocarpinæ hydrochloridi	gr v		33
Olei rosæ	gr viii		50
Olei rosmarini			
Tincturæ cantharidis, āā	℥ss	15	
Glycerini	℥i	30	
Olei amygdalæ dul	℥ii	60	
Spiritus camphoræ	ʒxxiv	96	

M Sig Rub well into the scalp night and morning

In alopecia prematura, Stelwagon, "Diseases of the Skin," states that the patient's general health and the condition of the scalp must both be considered. Of general tonics he mentions arsenic, cod liver oil, strychnin, iron and the hypophosphites The external treatment is the essential part. In cases in which eczema seborrheicum or seborrhea is present, or is the cause of the alopecia, treatment must be directed against this alone, and when this condition is removed the usual applications in uncomplicated cases of loss of hair can be utilized One of the most valuable remedies is resorcin, but Stelwagon warns against using this drug, except cautiously, for patients with white or gray hair, as it stains the hair, giving it a dingy yellow tinge Stelwagon recommends the following

℞ Resorcini	ʒi ii	4 8	
Olei tiglii	m iv xx		20 1.33
Olei ricini	m x xxx		65 1 90
Alcoholis vel			
Spiritus myrciæ	℥iv	120	

M Sig Apply to scalp night and morning

In alopecia areata Stelwagon advises giving arsenic internally, in the form of Fowler's solution, in doses of from 3 to 5 drops (0 2 to 0 33) three times daily Nux vomica and the iron tonics are also of value Locally he prescribes the following

℞ Sulphuris precipitatis	ʒi ii	4 8
Beta naphthol	gr xxx ʒi	2 4
Adeps lanæ	ʒii	8
Petrolati liq q s ad	℥i	30

Ft unguentum Sig Rub well into scalp once daily

The remedial application should always be carried one quarter or one half inch beyond the border of the affected area

If there are but two or three areas, Stelwagon states that the stronger remedies may be employed Of these he recommends an ointment of chrysarobin, from 10 to 60 grains to the ounce of lard or vaselin, well and energetically rubbed in

Hyde and Montgomery, "Diseases of the Skin," recommend the following formula

℞ Olei ricini	f℥ss	15
Phenol (acidi carbolici)	ʒi	4
Tincturæ cantharidis	f℥ss	15
Olei rosmarini	gtt xv	1
Alcoholis q s ad	f℥iv	120

M Sig Apply to the scalp

Jackson has recommended a pomade made by boiling down a stated quantity of the fluid extract of jaborandi to one half its volume and adding to this four parts of lard This is rubbed into the scalp twice daily Jackson also recommends a lotion of corrosive sublimate gr 1½ (0 1) to the ounce of water, not on account of its parasiticide qualities, but solely on account of its stimulating effect.

All the preparations in common use in this condition possess both parasiticide and stimulating properties

Heroin Addiction

Paul Duhem, in *Progrès Medicale*, calls attention to the fact that since the introduction of heroin, and especially since its employment in the treatment of morphin addiction, cases of heroin addiction have been observed in increasing numbers

Duhem bases his conclusions on 16 cases of heroin addiction observed in connection with Sollier Of these, three patients acquired the habit from the use of the drug for asthma, four were morphin habitués who had used heroin in the hope of cure, three had first taken the drug for pain, while in six others the use was traced to various causes, such as fatigue, overwork, insomnia and other nervous symptoms which were added to a neuropathic constitution The doses which were used as a remedy for asthma and other respiratory affections as well as those used as a substitute for morphin were rather large, 3 to 22 grains (0.2 to 1 5), while when used as an analgesic the amount was somewhat less, ½ to 1 grain (3 to 5)

The method of withdrawal of the drug was the same as that practiced by Sollier for the withdrawal of morphin The patient is isolated and preparatory treatment instituted to stimulate the eliminative organs Then the drug is withdrawn as rapidly as possible, ending in complete withdrawal in about a week, with constant supervision of the elimination, finally an abundant diet and tonic treatment are given Contrary to the experience with morphin, it was found that to allow injections of heroin during the course of the withdrawal was accompanied by serious inconveniences While morphin in minute quantity will restore a patient with slight cardiac defect, if he becomes prostrated during the withdrawal of morphin, patients addicted to heroin showed no such effect from injections of heroin Duhem, therefore, concluded that it is best in case of heroin addiction to withdraw the heroin completely and to substitute morphin for it. This method suffices to prevent many accidents, but does not obviate the dangers altogether The preference of heroin for the respiratory tract explains the frequency of attacks in which this function may be almost in abeyance These attacks of respiratory failure occur in cases in which they may not be expected From the moment of withdrawal the respiration and circulation are slowed and intellectual torpor is marked, there is marked sweating and a leaden type of countenance, but nothing indicates the imminence of the failure of respiration The pulse is generally good, and if the countenance is not watched the attack may not be noticed until it is in full action The breathing suddenly ceases, the face becomes pale, the eyelids tremble, the face becomes covered with a cold sweat and the patient loses consciousness In addition to rubbing the limbs a double injection of ether and morphin should be given, the use of heroin is without effect in such a case It is evident that heroin is removed from the system with much greater difficulty than morphin The patients become very feeble and emaciate alarmingly The normal functions are more slowly established and the convalescence is more tedious While morphin users regain their lost weight at the latest at the end of the second week, those habituated to heroin require four weeks or more for the restoration of their original weight.

These considerations lead to the conclusion that morphin is to be preferred to heroin when an active narcotic is to be used, and that physicians should be on their guard against allowing patients to become habitual users of this drug on account of the greater injury which its habitual use entails and the greater difficulty presented in curing the patient of the degrading habit

Gastric Sedatives

H B Sheffield, New York calls attention to the fact that a highly irritated stomach will often reject even the most palatable medicine Cracked ice cold or hot water calomel or bicarbonate of soda peppermint lime, or bitter almond water small doses of bismuth and cerium oxalate, minute quantities of tincture of iodin well diluted in water, are all useful gastric sedatives In continued vomiting of infants, lavage advantageously supplants drugging

When administering medicines to infants, it is often helpful to divide the regular dose, giving it, if need be drop by drop until the whole dose is consumed In this manner the most irritable stomach will frequently retain the medicine when it would otherwise reject it

Before prescribing any medicine the physician should always bear in mind the dictum "What is hateful to thee, do not unto thy fellow man"

Medicolegal

Duty Owed Injured Seamen.

The United States Circuit Court of Repeals, Third Circuit, says, in the case of The Mars, that the fact that a tug is engaged in comparatively short coast wise trips does not relieve her from the usual obligations of a vessel to her crew One of these is to furnish, at the vessel's expense, care and maintenance to a seaman injured in her service The Osceola, 189 U S, 175 This right extends to a fireman The North America, 5 Ben, 486 The word "cure" is used in its original meaning of care and means proper care of the injured sea man and not a positive cure, which may be impossible The Atlantic, Abb Adm, 451 The duty is to furnish means of cure and to use all reasonable efforts for that purpose Brown vs Overton, Fed. Cas No 2024 In the nature of things the end of the voyage does not end the obligation, if there was not sufficient time and facilities for the vessel to have then done its duty Its unfilled obligation may continue after the voyage ends McCannon vs Dominion Atlantic Company (D C), 134 Fed, 762, Henry B Drake, 141 Fed, 191, The Svealand, 136 Fed., 109, Reed vs Canfield, 1 Sumn, 195 Neither the ancient codes nor the modern decisions show any reasoning or authority for holding that, where the injury to the seaman in the performance of his accustomed duties, was received through remissness or not unusual carelessness on his part, he thereby forfeits his right to cure and maintenance The Osceola, The City of Alexandria (D C), 17 Fed, 395, The Ben Flint, 1 Abb (U S), 126

Good Case Made Against Illegal Practitioner

The Supreme Court of Iowa affirms, in the case of the State vs Kendig, a conviction of practicing medicine without a license The indictment, found under Sections 2579 and 2580 of the Iowa Code, charged that "the said A J Kendig, on the 1st day of September, A D 1903, and from the said 1st day of September, A D 1903, until the time of the finding of this indictment, did, in the county of Madison and state of Iowa, falsely wrongfully and unlawfully assume the duties of a physician and make a practice of prescribing and furnishing medicine for the sick, and did wrongfully, falsely and unlaw fully publicly profess to cure and heal, without having first obtained from the board of medical examiners of the state of Iowa and filed for record, a certificate conferring on him the right to practice, contrary to the statutes in such cases made and provided"

The indictment was challenged on several grounds, and, first, that it was not sufficiently certain as to the person charged, or as to the offense intended to be charged, in that the act or omission charged was not set forth with sufficient particularity It was said that the indictment did not give the slightest information as to the time, place or circumstances of the offense, nor of the evidence the defendant would be re quired to produce to establish his defense But the court holds that here the statutory definition of the crime was complete, and, as the indictment charged the defendant's offense in the language of the statute, it was sufficient

Again it was said that the indictment did not charge the defendant with prescribing medicine for, or practicing on, human beings, as distinguished from furnishing medicine for domestic animals This objection, the court says, was purely hypercritical and without merit According to the common understanding as well as in law, there is a distinction be tween the practice of medicine and the healing of the sick and the treatment of diseased animals

Nor does the court think that the indictment was insuffi cient in that it did not negative the exceptions contained in the statute as that it shall not be construed to prohibit stu dents from prescribing under certain conditions or gratuitous services in the case of emergency etc The court says that the general rule as to exceptions, provisos, and the like is that where the exception or proviso forms a portion of the descrip tion of the offense so that the ingredients thereof can not be accurately and definitely stated if the exception is omitted, then it is necessary to negative the exception or proviso, but where the exception is separable from the description and is not an ingredient thereof it need not be noticed in the accusation, for it is a matter of defense

That there was ample testimony to justify the verdict re turned, the court explains by saying that there was no doubt that the defendant was visiting the sick, diagnosing their ailments and furnishing medicines for their cure Not only this, but he filed claims against the estates of some of his patients for medical services rendered and asked the county to recompense him for treating a "county charge" The statute, the court further says, was intended to cover the advertising and selling of all medicines except those known as "patent" or "proprietary," and there was no testimony that the medicines which the defendant was vending belonged to either of these classes Moreover, the defendant was not merely selling certain preparations, but he was visiting the sick and prescribing them for his patients

By Whom Statutory Privilege May be Waived.

The Supreme Court of Minnesota says, in the case of Olson vs Court of Honor, that Section 5662, Subdivision 4, of the General Statutes of Minnesota of 1894 provides that "a regular physician or surgeon can not, without the consent of his patient, be examined, in a civil action, as to any informa tion acquired in attending the patient which was necessary to enable him to prescribe or act for the patient." It is manifest that the purpose of the statute is to protect the patient, and not his adversary, for the evidence may be received with the consent of the patient

Does this privilege become absolute on the death of the patient, or may those who represent him or claim an interest under him after death waive the privilege for the protection of such interest? This is an important question, for if they can not waive the privilege given by the statute, and their adversary may invoke it to suppress the truth and defeat the enforcement of rights the deceased provided for them in his lifetime, then the statute may be made an instrument for cheating justice If such be the proper construction of the statute, then, if an executor or legatee presents a will for probate which is contested on the ground that the testator was of unsound mind when the will was made, the executor or lega tee may not, if the contestant objects, call the physician who was attending the testator at the time to testify as to his knowledge of the patient's mental condition, acquired in attending him Nor could the personal representatives of a party, in an action to recover damages on account of the death of his intestate by the alleged negligence of the de fendant call the physician who attended the intestate after his injury to testify as to the nature of the injuries and the cause of death, if such information was acquired in attending him.

Again, the case under consideration, the court says, illus trates the unreasonableness of such a construction The de fendant insured the deceased for the benefit of her husband and children against death by unintentional self destruction while under treatment for insanity The best, and perhaps the only, evidence to prove that the deceased was under treatment for insanity at the time of her death was the testimony of the physician Yet, if the statute was to be construed as the defendant claimed, then the plaintiffs, who were asserting a right under the deceased which provided for them in her lifetime, might not waive the privilege, but the defendant might invoke it to defeat the enforcement of their right It can not be that such is the proper construction of the statute for it is unreasonable and unjust

The adjudged cases, however, relevant to this question, are not in entire harmony, due, perhaps, to a difference in the wording of the several statutes construed On principle and what seems to be the weight of judicial authority this court holds that the statute in question is for the protection of the patient, and he may waive the privilege if he sees fit, and that as a general rule those who represent him after his death may also waive the privilege for the protection of in terests which they claim under him In re Will of Layman 40 Minn 371 Coates vs Semper 82 Minn, 460, 23 Enc of Law 90 Denning vs Butcher 91 Iowa 425, Winters vs Winters, 102 Iowa, 53 Grand Rapids Ry Co vs Martin 41

Mich, 667, Scripps vs Foster, 41 Mich, 742, Fraser vs Jennison, 42 Mich, 207, Groll vs Tower, 85 Mo, 249 It follows that the evidence of the physician in this case was competent

Insanity at Time of Trial and Expert Testimony

In the United States Circuit Court in Alabama, in United State vs Chisolm, an inquiry as to the sanity of a prisoner, the jury were told, among other things, that finite man at last gropes but darkly into the conditions of the human mind, and it is impossible for any court to lay down any fixed rule, as a matter of law, as to any particular state of facts which will unerringly demonstrate sanity, or the contrary condition of the human mind, or the degree of aberration which, when found to exist, exempts an accused person from criminal responsibility, or unfits him to rationally aid in his defense when arraigned for crime

But whether or not an individual's departure from general rules governing human action demonstrates such aberration of mind as exempts him from criminal responsibility, or shows unfitness on that account to be placed on trial, depends on the circumstances of the particular case, and is to be gathered not merely from the act for which he is arraigned, but must also be determined and tested in view of every other fact and circumstance which sheds light on the condition of the defendant's mind at the period as to which the inquiry is directed Each particular case, therefore, presents a practical question, in the decision of which general tatements of the theories of medical men and the reasoning of jurists furnish only partial, and sometimes little, if any, practical help

A person may be insane or partially so at one time, and subsequently be restored to sanity, and afterward be a responsible being in the eyes of the law The reason why an insane person, or one who, though not insane, is laboring under such mental infirmity as to prevent his rationally aiding in his defense, should not be put to trial, is, in the language of the old books, "because he is disabled by the act of God" from making a just defense if he has one, and "because there may be circumstances lying in his private knowledge which would prove him innocent or his legal irresponsibility, of which he can have no advantage, because they are not known to persons who undertake his defense" Nevertheless, a person though not entirely sane, may be put on trial in a criminal case if he rightly comprehends his own condition with reference to the proceedings, and has such possession and control of his mental powers, including the faculty of memory, as will enable him to testify intelligently and give his counsel all the material facts bearing on the criminal act charged against him and material to repel the criminating evidence, and has such poise of his faculties as will enable him to rationally and properly exercise all the rights which the law gives him in contesting a conviction

The defense of insanity, or mental inability to properly conduct a defense, is frequently resorted to without any just basis, and in passing on such questions the jury may give that consideration such weight as in their opinion it may deserve in connection with all the facts in the particular case It would be a reproach to justice if a guilty man escaped the penalty for a crime on a feigned mental irresponsibility, or postponed his trial on a feigned condition of mind, as to his inability to aid in his defense On the other hand, it would be likewise a reproach to justice and our institutions if a human being "made in God's own image," while suffering, as the old books put it, "under a visitation of God," were compelled to go to trial when he is not sufficiently in possession of his mental faculties to enable him to make a rational and proper defense The latter would be a more grievous error than the former, since in the one case an individual would go unwhipped to justice, while in the other the great safeguards which the law adopts in the punishment of crime and the upholding of justice would be rudely invaded by the tribunal whose sacred duty it is to uphold the law in all its integrity

The jury is not bound by the opinions of experts If the jury s common sense, reason, judgment and observation, in view of all the evidence, produce the conviction in its mind that the expert is wrong in his opinions and conclusions, it may be governed by its own opinion and not by his A jury should not capriciously or recklessly disregard the advice of medical men of experience in dealing with diseases of the human mind, and the advice of physicians as to such matters should be carefully weighed, but the final responsibility in arriving at a decision as to the mental condition of the prisoner rests on the jury In this case all of the testimony of the medical experts seemed to agree that the prisoner had neurasthenia One of them gave the opinion that he was suffering from incipient paresis The name of the mental disease, if the prisoner was, in fact, suffering from such disease, was not important

In the absence of any proof on the subject, the law presumes that every ordinary being of mature age is responsible in all respects, and the government in prosecuting a defendant for crime is not bound to offer any evidence on that point, but may rest on the presumption When, however, any facts are developed which go to rebut the presumption of responsibility, it becomes a question of fact in the particular case While the force of the presumption of innocence until guilt is found beyond a reasonable doubt has no field of operation whatever in solving such an issue as that now submitted, yet the humanity of the law is such that no man should be considered a proper subject for criminal prosecution of whose ability to fairly and rationally make a defense there is just ground for reasonable doubt in the minds of the judge or jury which passes on that issue

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York

March 23

1 *Fracture Dislocation of Spine S Lloyd, New York
2 *Pathologic Changes in Fracture Dislocations of Spine P Bailey New York.
3 *Treatment of Fracture Dislocations of Spine I S Haynes New York
4 *Phototherapy in Nervous Disease A. D Rockwell New York
5 *Early Mobilization of Patients After Major Gynecologic Operations A Brothers New York
6 *Prognostic Value of the Diazo Reaction in Tuberculosis. J R Williams, Greensboro N C

1 **Fracture Dislocation of Spine**—Lloyd reviews the clinical history of fracture dislocation of the spine, and many of his views in regard to the treatment of his condition agree with those held by others His previous papers on the same subject cover the ground fully He has now performed laminectomy 32 times, and while some of his cases have improved to a marked degree, a very considerable number have shown absolutely no benefit from the operation In none of the cases does he attribute the improvement to regeneration He says that if regeneration of the cord does occur, more improvement would have followed in some of the cases in which no benefit was manifested He says it is more than likely that there have been nerve fibers that were not destroyed and that have recovered their function, allowing for a more or less considerable improvement in the patient's condition Spinal regeneration in the human species has not been proved, and therefore, it is fallacious to hold out this hope to the patient.

2 Id.—Bailey agrees with Lloyd in the matter of regeneration of the spinal cord He says that in one third of the fracture dislocations of the spine, the cord escapes all injury This is especially true in the cervical region He says that the damage to the cord is that which takes place at once Bailey does not believe that long continued pressure has much to do with it since if severely injured the cord shrinks and there is still space in the canal to hold t

3 Id —Haynes says the trea[illegible] und[illegible] expectant plan consists of extension and im[illegible] plaster jacket If there is no evidence of [illegible] ry is not in the thoracic region, repla[illegible] thout cut

ting But if the injury is in the thoracic region, or the cord is involved, it will be necessary to cut down on the laminæ and spinous processes, open the canal, remove detached pieces of bone, or clots, arrest hemorrhage, and give drainage Even if the cord is not involved at first, unless an immobolizing apparatus is used, slipping of the vertebræ may cause or increase the injury of the spinal cord.

Haynes believes that, even if we can not diagnose the exact injury to the cord we should promptly open the canal and give the patient the benefit of the doubt, since pressure for some days will make permanent an injury that might be relieved by early operation Even when the cord has been entirely severed, a sort of repair goes on which improves the condition of the patient and enables him to live, while without repair death ensues under a year

4 **Phototherapy in Nervous Diseases**—Rockwell claims that, as a rule, whenever and wherever pain exists, whether in the form of the neuralgias or neuritis, or pain of the rheumatic or gouty type, a judicious application of the light bath is pretty certain to give temporary relief, and successive applications, in a large proportion of cases, are followed by permanent relief In the toxemias and the toxic neuroses the therapeutic value of light energy is beyond question The benefit derived from the light bath is often greatly enhanced by supplementary physical methods, such as static high frequency currents and general faradization

5 **Early Mobilization After Gynecologic Operation.**—Brothers sums up his views as follows Early mobilization tends to overcome ordinary vomiting, accumulation of intestinal flatus, and bronchial irritation from retained secretions in the air passages Instead of contributing additional risks to the possibilities of thrombosis and embolism in the absence of septic infection, the early moving about of these patients actually tends to reduce these risks The morale of these patients is always wonderfully improved The total result is an earlier and more pleasant convalescence Brothers cites a number of cases in support of his views

6 **Diazo Reaction in Tuberculosis.**—Williams always makes a careful and complete urinary analysis of every case of pulmonary tuberculosis, and the diazo reaction is one thing in particular that he always looks for, believing its presence or absence a valuable prognostic sign He says that the absence of the reaction in white patients is of favorable prog tic value In the colored patient, the absence of the tion is of no prognostic value The presence of the diazo tion in white patients is of unfavorable prognostic value illiams says that not only the fresh specimen of urine should be examined, but also one which had stood for twenty four hours

Boston Medical and Surgical Journal.

March 21.

7 *Subdeltoid Bursitis C F Painter Boston
8 *Surgery of the Right Upper Abdominal Quadrant. F B Lund Boston
9 *Practical Considerations in Treatment of Neurasthenia. W C Canfield Bristol R I
10 Studies in Psychopathology B Sidis Brookline Mass
11 New Obstetric Forceps F L Good Boston
12 Progress in Theory and Practice of Medicine H A. Christian Boston

7 **Subdeltoid Bursitis**—That traumatism in one form or another is the usual cause of subdeltoid bursitis is shown by the four cases reported by Painter He says that the most common injury producing this condition is a fall on the shoulder or a violent twist or wrench of this articulation Painter believes that the treatment of all these cases should consist in open incision and removal of the entire sac irrespective of the duration of the case or the cause of the condition The after treatment, which is begun within a week or ten days, consists of passive motion and hot fomentations to the shoulder Painter found that the prognosis is better after the open method of treatment than after simple manipulation Convalescence is also much shortened and the functional results are considerably better

8 **Surgery of Right Upper Abdominal Quadrant**—Lund emphasizes the advantage of early operation in diseases of the stomach gall bladder and pancreas and the imperativeness of early operation in perforations He says that present diagnostic methods are inadequate, and therefore the surgeon must hold himself in readiness at all times to meet conditions different from those suspected before operation

9 **Treatment of Neurasthenia.**—In the treatment of neurasthenia, Canfield considers it wise to begin at once with physical therapeutics, consisting of isolation, rest, over feeding, and exercise. These remedial measures are followed up by psychotherapeutics

New York Medical Journal.

March 23

13 *Essentials in Crusade Against Tuberculosis L F Flick, Philadelphia
14 Historical Sketch of the Development of Percentage Feeding T M. Rotch, Boston
15 *Physical Processes of Immunity and Infection J Wright, New York
16 *Behavior of Eosinophile Leucocytes in Pulmonary Tuberculosis J M. Swan and H T Karsner Philadelphia.
17 Essentials for Success in Medicine C E Nammack New York.
18 *Aural Affections in Relation to Mental Disturbances W S Bryant, New York
19 Pasteurization Advantages and Disadvantages to Consumer R. G Freeman New York.
20 *Use of Ammonia in Counteracting Fumes of Formaldehyd. E. V Wilcox Washington D C

13 **Essentials in Crusade Against Tuberculosis.**—The essentials in the crusade against tuberculosis are enumerated by Flick as follows 1 The control of contagion 2 The disinfection of infected places and things 3 Life in the open air 4 Proper food. He says that so far as possible the work in a community should be led by private effort and supported by the government. Education and the value of fresh air and proper food should be inaugurated everywhere and carried on in the school room, in the press, and on the platform He urges the establishment of sanatoria and convalescent farms for consumption, although he considers the hospital the most efficient for the prevention of tuberculosis as it removes patients from the community during the period when the disease is in its most contagious form

15 **Physical Process of Immunity and Infection.**—This is the third paper by Wright on this subject. In it he discusses the electro-dynamics of the surfaces of living protoplasm

16 **Behavior of Eosinophiles in Pulmonary Tuberculosis**—Swan and Karsner present further evidence of the behavior of the eosinophile leucocytes in cases of tuberculosis, with special reference to the prognostic value of these cells found in the peripheral blood. Differential counts of the leucocytes in the blood of 31 cases of pulmonary tuberculosis were made Of this number, 26 cases were fatal and five were stationary, or were improving under treatment at the time the observations were discontinued In all the fatal cases except two the eosinophile cells were below 1 per cent as a rule, at periods varying from 102 days before death to the day of death In the cases which remained stationary or which were improving under treatment the eosinophiles, while subject to fluctuations, were present in fair proportion, usually over 1 per cent. The authors conclude from their observations that in cases of pulmonary tuberculosis the eosinophile cells tend to disappear from the circulating blood as the progress of the disease brings the fatal termination nearer, and that as the patient improves under treatment and as the disease shows a tendency to become arrested, the eosinophile cells reappear in the circulating blood. A full report of the cases studied is appended to the paper

18 **Ear Disease and Mind Disease**—The results of Bryant's experience in examination of the ears of the insane have convinced him that ear disease is much more prevalent among the insane than among the sane In fact, it is the exception not to have some demonstrable functional disturbance of the ear Bryant found it present in 90 per cent of the insane examined In many of these cases a history was obtainable which showed that the ear disease was in existence before the insanity appeared, and in others the condition of the ears was such that it must have antedated the mental disturbance

20 **Ammonia to Counteract Fumes of Formaldehyd**—Wilcox subscribes to the value and efficiency of using ammonia for the purpose of neutralizing formaldehyd In fumigating a sick room containing 1,500 cubic feet of space, two quarts of methyl

alcohol were consumed in a formaldehyd generator, and in addition three pounds of commercial formaldehyd were exposed on the sheets As soon as the room had been ventilated sufficiently to make it possible to work in it, one and one half quarts of ammonia were sprinkled over the rugs and bedding, and the room was closed again About the same proportion of ammonia was used throughout the other rooms of the house where the quantity of formaldehyd generated had been relatively somewhat less The formaldehyd fumes were completely destroyed within one-half hour, and the odor could not be detected in any part of the house except where formaldehyd had been spilled on the floor and had left an incrustation of paraform on the woodwork. As soon as these spots had been treated with ammonia the odor of formaldehyd disappeared entirely

Lancet-Clinic, Cincinnati.

March 23

21 The Good of the Profession F W Langdon Cincinnati
22 Further Studies in Nasal Therapeutics. J A Thompson Cincinnati
23 *Primary Syphilis of Lips and Tonsils. A. B Thrasher Cincinnati
24 Entoning of the Neurones in the Practice of Medicine and Surgery C H. Hughes St Louis

23 **Primary Syphilis on Lips and Tonsils.**—Four cases of innocently acquired syphilis are reported by Thrasher, not because the cases are unique, but solely for the purpose of directing attention to the fact that such cases occur far more frequently than is usually supposed In two of the cases the tonsil was affected and in the remaining two the lesion was situated on the lip

St Louis Medical Review

March 16

25 *Causation of the Waste of Infant Life. B Joll London Eng
26 Medical Education in Paris C G Chaddock St. Louis
27 Medical Education in London L Williamson St. Louis

25 **Waste of Infant Life**—According to Joll, the chief causes of the waste of infant life are improper feeding, insanitary surroundings, ignorance of parents, and immorality

Annals of Surgery, Philadelphia.

March

28 *Sarcoma of the Long Bones W B Coley New York.
29 *Successful Anterior Thoraco bronchotomy for a Foreign Body Impacted in Bronchus F A Goeltz Erie Pennsylvania.
30 *Surgical Treatment of Empyema. S Lloyd New York.
31 *Cysts of the Omentum R E Fort, Nashville Tenn
32 *Tuberculosis of the Bladder G Walker Baltimore.
33 *Drainage of Knee Joint in Severe Infections by the Transverse Incision C H Peck New York
34 *Diffuse Cavernous Angioma of the Upper Extremity A. P C Ashurst, Philadelphia.
35 *Fracture of Coracoid Process of Scapula Caused by Muscular Action O H Petty Philadelphia
36 *Glanders in Human Subject. J T Pilcher New York

28 **Sarcoma of Long Bones**—The diagnosis, treatment and prognosis of sarcoma of the long bones are discussed by Coley, and he reports 69 cases The great majority of his cases were treated by the routine methods now in vogue, namely, high amputation or exarticulation at the proximal joint He has resected in no case He performed amputation at the hip joint eight times without mortality, but four of the six patients in whom it was performed for sarcoma of the femur died within the year, the fifth in one and one-half years, and the sixth was not traced In two the amputation was done for sarcoma of the soft parts One patient died a year later and the other, who had received several months' treatment with the mixed toxins prior to amputation, now remains well after a period of six years Coley has seen six cases of sarcoma in patients under ten years of age, one, a sarcoma of the humerus in an infant twenty months old, and four of the femur in patients aged seventeen months, six, seven, and nine years respectively Amputation was done in 2 cases, disarticulation in 16, resection in 6, and in 29 no operation was done. Coley believes that the use of the mixed toxins of erysipelas and bacillus prodigiosus after operation will greatly widen the limits within which the operation of resection may be employed safely, even in the cases of more malignant sarcomas All the cases are reported in full

29 **Anterior Thoraco-Bronchotomy**—In the case reported by Goeltz a metal collar button was inspired and lodged in the right bronchus It was impossible to remove the button, except by operation—thoraco bronchotomy—and this was done successfully Forty eight hours elapsed between the inspiration of the button and its removal.

30 **Surgical Treatment of Empyema.**—In the method employed by Lloyd the opening in the chest is made in the usual way, the pleura is incised, and the accumulated fluid is allowed to drain away gradually at first. Ether is the anesthetic employed, and before opening the pleura the anesthetic is stopped in order that there may occur a sudden expansion of the lung, and that during the remainder of the operation the patient may be coming from under the effects of the anesthetic gradually As soon as the fluid is drained away, the opening in the pleura is made sufficiently large to permit of thorough exploration of the pleural cavity and to locate the position of the collapsed lung While the adhesions are being severed with the finger the patient begins to cough, owing to the sensitiveness of the pleura, and with each forced expiration expansion of the lung takes place until finally the lung fills the pleural cavity Lloyd employs a drainage tube, which in appearance is similar to a spool He has operated in 225 cases by this method Of these, 97 patients were cured, 58 were improved, and 47 died (including the deaths from all causes and for all periods of time after the operation)

31 **Cyst of Omentum.**—Fort discusses 21 previously recorded cases of cysts of the omentum and adds one personal case

32 **Tuberculosis of Bladder**—In this paper Walker discusses the differential diagnosis, the prognosis and the treatment of tuberculosis of the bladder

33 **Drainage of Knee Joint.**—Peck believes that drainage of the knee joint by the transverse incision has not received the attention it deserves He says that the operation should not be employed in mild or early cases in which there is hope of recovery with some preservation of joint function, drainage and irrigation through multiple incisions being preferable He insists that a distinction should be drawn between cases in which the crucial ligaments are preserved and straightening the limb without resection, resuturing the patella or its ligament and preserving some degree of function is the end in view, and in the severer cases where avoidance of amputation or death from sepsis are the sole considerations He maintains that in the latter class of cases the complete operation is of great value and should, as a rule, be followed by resection as a secondary procedure, except in children Flexion of at least 45 per cent. on a suitable splint is essential The secondary operation should not be performed until suppuration has ceased, surfaces are cleanly granulating, and temperature is practically normal

34 **Diffuse Cavernous Angioma.**—Ashurst adds one case to 11 other cases recorded in the literature His patient was a little girl, 12 years of age, the tumor being situated on the extensor surface of the forearm just above the wrist The front of the thorax on the right side was the seat of a nevus composed of dilated capillaries, and below the angle of the right scapula was a mass the size of a walnut Similar masses were palpable in several other localities

35 **Fracture of Coracoid Process of Scapula**—Petty reports a case of fracture of the coracoid process of the scapula in a powerfully muscled man, 57 years of age The shoulder was treated by dressing the arm in the Velpeau position, which subsequently had to be changed on account of the inconvenience it was causing and the right arm was bound to the side of the patient, leaving his forearm free Later, light massage and passive motion were employed At the end of the seventh week the patient was still unable to raise his right arm above his head

36 **Glanders.**—Pilcher presents a detailed report of two cases of glanders occurring in the human subject In one case the infection is believed to have occurred through inhalation and in the other case through a scalp wound Both cases terminated fatally In one case the incubation period was 25 days and the other only 5 days In both cases the striking feature was the fact that the degree of prostration was greatly out of proportion to the physical signs There was early involvement of the larger joints of the body

The Post-Graduate, New York.

February

37 *Urea Uric Acid Ratio W H Porter New York
38 Case of Monocular Hysterical Amblyopia D B St J Roosa New York.
39 Systematic Treatment of Syphilis W S Gottheil New York
40 Syphilitic Lesion of Lyelid. J Pederson, New York
41 Case of Rachischisis P Horowitz, New York
42 Value of Cystoscopy in Gynecology H D Furniss New York
43 Surgical Treatment of Empyema. S Lloyd New York

37 **Urea Uric Acid Ratio**—After a very careful study of the exact ratio between the output of urea and uric acid, Porter concludes that no fixed standard of proteid intake has been established and that no fixed composition of the urine exists The main point to be determined is the amount of uric acid produced because it is a positive index to one form of sub oxidation Securing all the urinary analyses possible from dif ferent sources, adding them together and striking an average, gives a fair standard of nitrogen output by the kidneys A similar method applied to the hepatic secretion and to other secretions and excretions gives the total daily output of nitrogen from the system Securing the total output of nitro gen determines the amount of food that must be ingested and assimilated to insure the full quota of nitrogen in the excreta, etc. Uric acid must be classed both as a secretion and as an excretion, and in both instances represents proteid utilization Porter says that faulty action of the liver often causes the toxic symptoms commonly classed as uremic, and especially so when there is an excessive elimination of nitrogen through the kidneys

Denver Medical Times

February

44 *Traumatic Appendicitis with Report of Case H A. Black Pueblo, Colo
45 *Case of Cleft Palate T E Carmody, Denver
46 Roentgen Ray Findings in Sarcoma of the Femur S B Childs, Denver
47 *Perforating Gastric Ulcer F L Dixon, Denver
48 *Simple Method of Controlling Hemorrhage in Certain Cases of Cesarean Section C K. Fleming Denver
49 *Massage of Heart in Death from General Anesthesia L Free man Denver
50 Appendicitis with Unusual Symptoms H G Harvey Denver
51 Amputation of the Penis P Jaffa Trinidad Colo
52 Uterus Bifida Unicervicalis with Pyosalpinx. Cystic Ovaritis and Adherent Appendix N A. Johanson Denver
53 *Mammary Sarcoma G W Miel Denver
54 Gunshot Wound of Femur Non Union Resection with Suture of Fragments Cure C A Powers, Denver

44 **Traumatic Appendicitis**—Out of 129 cases of appendi citis Black found three in which trauma was the direct cause, and one in which it served as an exciting agency In the first three cases there was no history obtainable which in the slight est would suggest previous trouble with the appendix

45 **Cleft Palate.**—Carmody reports a successful operation for cleft palate done on a young lady, 19 years of age The Brophy operation was the one employed

47 **Perforating Gastric Ulcer**—In the case reported by Dixon the perforation occurred in the anterior wall of the stomach It was closed with catgut sutures, 28 hours after perforation had occurred The case was interesting further because of the absence of many symptoms which typical cases of gastric ulcer offer, if not usually present previous to perforation

48 **Controlling Hemorrhage in Cesarean Section.**—The fol lowing plan of controlling hemorrhage under certain conditions was employed by Fleming After having made the usual in cision in the uterus the placenta was discovered attached to the anterior wall In attempting to detach it so as to enter the cavity through the membranes, it was found that not only the placenta but the membranes were firmly adherent to the uterus It then became necessary, in order to quickly deliver the fetus, to go directly through the placenta, which was done and the fetus delivered, cord cut between two forceps and the child handed to an assistant. The hemorrhage at this time was very profuse, both from the placenta and the incised uterine wall The assistant could but partially control it by the usual method of pressure on the broad ligaments Fleming grasped the uterus with both hands and quickly and easily inverted it through the incision, when the hemorrhage ceased immediately, after which the placenta and its membranes were carefully sep arated and removed, the uterus replaced and sutured

49 **Massage of Heart.**—Freeman reports one instance in which massage of the heart failed to revive the patient, a woman 38 years of age, who was being operated on for ob struction of the common bile duct by gallstones The patient had been jaundiced severely for months and the operation was one of necessity rather than choice She stopped breathing as soon as the abdomen was opened but was resuscitated by means of prolonged artificial respiration Strychnin was used and physiologic salt solution was injected during the operation While the wound was being sutured the patient's breathing again ceased Artificial respiration, continued for ten min utes, resulted in failure Meanwhile the cardiac impulse had stopped and heart massage was resorted to, but also proved ineffective

53 **Mammary Sarcoma.**—Miel cites a case of sarcoma of the breast occurring in a colored girl, 16 years of age The tumor was removed and after six years there is no evidence of recur rence

Utah Medical Journal

February

55 Inguinal Hernia and Its Relation to Corporations J F Critchlow Salt Lake City
56 Mental and Moral Delinquencies in the Degenerate or Feeble minded W B Ewing Salt Lake City

St Louis Courier of Medicine

February

57 *Conditions Experienced in Cases of Ordinary Labor That Have Caused Me at Times Considerable Discomfort. F Reder St Louis
58 *Acute Fever in Childhood, Usually Incorrectly Diagnosticated. J Zahorsky St. Louis.
59 Treatment of Goiter H N Chapman St Louis

57 **Complications of Labor**—The conditions discussed by Reder are unusual rigidity of the soft parts, a want of cor respondence of axis caused by obliquity of the uterus, and a mechanical obstruction of the os by a scar, the result of a trach elorrhaphy performed five years previously

58 **Acute Fever in Childhood.**—Zahorsky refers to an acute infection of the urinary tract, occurring especially in girls, which gives rise to an acute fever of varying duration and in tensity and which is often overlooked He has seen nine cases The fever resembles that of typhoid, but it is dependent on an infection of the urinary tract A remarkable feature of these cases is the slight disturbance of the bladder

American Medicine, York, Pa

February

60 *Orchitis in Typhoid. N B Gwyn Philadelphia.
61 *Pre-icteric Itching D Riesman Philadelphia.
62 Nervous Disorders of Children Their Relation to School Life and Work J Punton Kansas City, Mo
63 Chronic Appendicitis W H Morrison Philadelphia
64 Rupture of Colon from Violent Peristalsis Probably Induced by Fecal Impaction G W McCaskey, Fort Wayne.
65 Treatment of Cardiac Dilation in Pulmonary Tuberculosis by Means of Artificial Nauheim Baths. G W Norris Phila delphia
66 Bilateral Malignancy of Ovaries L. J Hammond Philadel phia
67 *Medicines and Means for Control of Postpartum Hemorrhage J S Raudenbush Philadelphia
68 Thrombosis of the Superior Mesenteric Artery with Hemor rhagic Infarction and Perforation of the Ileum J Funke Philadelphia.
69 *Congenital Fetal Malformation C. S Barnes Philadelphia
70 Seven Years with Home Treatment of Tuberculosis in Private Practice J B Martin Lynn Mass
71 Purulent Meningitis with Meningococcus Intracellularis A Gordon Philadelphia.
72 Tests of Water by Bacterial Inoculation O A Johannsen Ithaca N Y

60 **Orchitis in Typhoid.**—Gwyn reports two cases of typhoid in which orchitis was a complication In the first case the onset of the orchitis was marked by a severe abdominal pain in the appendiceal region, with marked distension slight rising pulse and temperature, but no leucocytosis, muscular rigidity or signs of collapse suggesting perforation Following this the testis on that side became enlarged The swelling subsided quickly the pain disappearing by the fourth day This case is of interest in that it gives another clue to the origin of some cases of abdominal pain in typhoid In the second case the orchitis occurred during the fifteenth week The pain in the testis and groin was most severe the gland rapidly swelled to the size of a goose egg, constitutional disturbance was marked After a week the organ suppurated and the abscess broke through the scrotum Gwyn says that evidently this was a case of direct typhoid infection in the testis

61 **Pre Icteric Itching**—Riesman reports three cases of jaundice in which itching was the first symptom, showing that the itching is not due to a deposit of bile pigment in the skin, but in all probability is caused by some metabolic poison Riesman suggests that when itching exists for which no cause can be found, the liver as a possible factor should not be overlooked He says that pre icteric itching is suggestive, though not pathognomonic of the existence of malignant disease involving the liver or the biliary pasages

67—See abstract in THE JOURNAL, Jan 13, 1906, page 149

69 **Congenital Fetal Malformation.**—In the case reported by Barnes two inches of the duodenum were replaced by a small impervious fibrous cord Below this cord the intestine was abnormally small for a short distance and then shaded into a normal bowel The child died of exhaustion at the end of 72 hours

Buffalo Medical Journal
February

73 *Infantile Scurvy C W M Brown Elmira N Y
74 Plea for Earlier Diagnosis of Appendicitis. A L. Beahan, Canandaigua, N Y
75 *Prevention of Tooth Decay F W Low Buffalo
76 Case of Cerebral Abscess Operation Death L W Rose and R G Cook, Rochester
77 Fracture of Skull with Complications. A M Rooker Buffalo

73 **Infantile Scurvy**—Brown gives the histories of five cases of infantile scurvy observed by him One of the cases terminated fatally

75 **Prevention of Tooth Decay**—Low discusses briefly the report of the committee on scientific research of the New York State Dental Society in which is recommended the administration of potassium sulphocyanate in one grain doses, before retiring at night, for the prevention of tooth decay This commission found that in mouths where rapid and general decay of the teeth exists, potassium sulphocyanate is absent, whereas this salt is present in large quantities in the mouths of individuals whose teeth are immune to decay

Montreal Medical Journal.
February

78 Glanders in Canada G D Robins, Montreal
79 Family Physician and the Insane. T J W Burgess, Montreal
80 *Miliary Tubercle of the Choroid G H Mathewson Montreal
81 The Quality of Milk What Can Be Done to Improve It J E Laberge Montreal
82 Purulent Conjunctivitis H. McKee Montreal

80 **Miliary Tubercle of Choroid.**—Mathewson reports two cases which present some interesting features The first case was diagnosed as a pleurisy with effusion, and a considerable quantity of fluid was removed An examination of the fluid and also of the sputum for tubercle bacilli proved negative A guinea pig was inoculated with some of the pleural fluid and when killed showed definite signs of tuberculosis A careful examination of the eyes revealed two miliary tubercles of the choroid in the left eye. The patient died with pronounced symptoms of meningitis A necropsy could not be done The second case presented the characteristic symptoms of typhoid including a positive Widal reaction, but the period of elevated temperature was unduly prolonged The patient began to complain of headache, cough and scanty expectoration Examination of the sputum for tubercle bacilli was negative. An area of slightly impaired resonance was found at the apex of the right lung In each eye there was a single miliary tubercle The patient died and the necropsy showed miliary tuberculosis of lungs, liver, kidneys, meninges and choroid

Western Medical Review, Omaha
February

83 The Trained Nurse F A Long Madison Neb
84 Treatment of Fractures of the Neck of the Femur J P Lord Omaha
85 *What Shall We Do to Check the Commission Evil H Gifford Omaha.
86 Use and Abuse of Obstetric Forceps A B Somer Omaha
87 Salt Action and Salt Solutions A L Muirhead Omaha

85 **How to Check Commission Evil**—In Gifford's opinion there are two measures that would, in a measure, check the commission evil One of these would be for the state or national society to come out flat footed and say that the best way for the general practitioner to get his dues is to establish a rule that he is entitled to a definite share, say 10 per cent. or 25 per cent, of the fee charged by the specialist, and that this share shall be paid with the full knowledge of the patient, and that any one paying or offering to pay a larger commission than the established one shall be expelled from the society Such a plan, objectionable as it might be on some grounds, would at least have the merit of being free from hypocrisy Its most serious defect, however, is that it would inevitably lead to one of the abuses which any system of commission giving leads to, namely, to the sending off of a lot of patients for operations or consultations which could well be avoided The other measure, and the one which Gifford seriously proposes for consideration, is a rule which shall automatically expel from the society any member who, after a fair and impartial hearing shall be found guilty of giving or taking commissions

The Ophthalmic Record, Chicago
February

88 *Impressions of the Basle or Inner pole Magnet H Gifford Omaha.
89 A New Fixation Forceps C H Beard Chicago
90 Tuberculin Injections in a Case of Probable Cerebellar Tumor H B Young Burlington, Iowa
91 Chalazion Forceps H R Boettcher Chicago
92 *Pulsating Exophthalmos—Ligation of the Orbital Artery—Recovery F P Lewis Buffalo
93 *Simple Test for Convergence Power M D Stevenson Akron Ohio

88 **Inner Pole Magnet**—Gifford questions whether the inner pole magnet can excel or even equal the strength of the Haab instrument, but his experience has convinced him that the instrument possesses advantages which make its use desirable These advantages are the ease with which the eye can be illuminated when the small points are used, and the handiness of the small cores in comparison with the giant magnet or any hand magnet. Where a maximum of magnetic force is desired, the Haab instrument, used as an inner pole, is the ideal one

92 **Pulsating Exophthalmos.**—Lewis' patient was a strong man, 26 years old, who received a blow on the head, which rendered him unconscious After several weeks a pulsating exophthalmos was present A marked feature of the case was a feeling of anxiety almost amounting to nervous terror Having decided that an aneurism of the ophthalmic artery was responsible for the condition, Lewis concluded to operate The artery was tied off just within the orbital cavity and within three weeks all the symptoms, except some divergence, had disappeared The patient eventually made a complete recovery Vision in each eye was 20/30 The interest in this case centers in the fact that although some portion of the aneurism extended outside of the orbit, a ligature within succeeded in controlling it, and that without removal of the eye

93 **Test for Convergence Power**—The test described by Stevenson is used to ascertain whether a patient's eyes converge just enough, too much, or too little for an object held one third of a meter from the eyes, while the desire for single vision is suppressed

Canada Lancet, Toronto
March

94 Perforation in Typhoid McPhedran Toronto
95 Treatment of Chronic Heart Diseases. T Schoot Nauheim Germany
96 Hygiene in Public Schools C J Fagan
97 Case of General Septic Peritonitis J B Coleridge Ingersoll

Journal of the Minnesota State Medical Association, Minneapolis.
March 15

98 Gastrogenic Intestinal Diseases A Schmidt Dresden Germany
99 Treatment in Cerebrospinal Fever F E. Bigelow Owatonna Minn
100 Paracentesis Spinalis with Report of a Case of Cerebrospinal Meningitis W H Witherstine Rochester Minn
101 A Few Drugless Remedies in Treatment of Disease O F Way Claremont Minn

Vermont Medical Monthly, Burlington
March 15

102 Treatment of Pernicious Vomiting of Pregnancy I A Colton Montpelier Vt.
103 The Third Stage of Labor F B Watson Williamstown Vt
104 Postpartum Hemorrhage C E Griffin Fair Haven Vt
105 Repair of Lacerated Perineum A C. Bailey Randolph
106 Care of Newborn Infant. C H Burr Montpelier

Annals of Gynecology and Pediatry, Boston.
March

107 Ectopic Gestation. H F Quackenbos New York

American Practitioner and News, Louisville, Ky

March

108 Cholera Infantum or Acute Milk Infection J. C Butler, Mountain City Tenn
109 Emergency Surgery F W Samuel, Louisville Ky
110 Treatment of Acute Diffuse Peritonitis A D Willmoth, Louisville Ky

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional interest.

British Medical Journal, London

March 9

1 *Friedreich s Ataxia T W Griffith
2 *Treatment of Incipient and Borderland Cases of Insanity in General Practice E W White
3 *Case of Abscess of Cerebrum Recovery L B Rawling
4 *Total Enucleation of Prostate, for Radical Cure of Enlargement of that Organ P J Freyer
5 *Tetanus Treated with Antitetanic Serum M. W Hall, E G Carter and C R. Howard.
6 *Staining of Animal Parasites I W Hall.
7 Kala Azar L. Rogers

1 **Freidreich's Ataxia**—Griffith reports five cases of this affection occurring in two families In one family two sisters, aged respectively 17 and 10 years, were affected, and in the other family the second, third and seventh members of a family of 13 were affected These three patients were two brothers, aged respectively 20 and 18 years, and a sister, aged 27 years

2 **Incipient and Borderland Cases of Insanity**—The cases considered by White in discussion of treatment are the following Backward or deficient children, epileptics, neurotics, the moral imbecile, incipient melancholia and mania, borderland delusional cases, the premature dements, borderland alcoholic insanity and paralytic insanity, incipient senile dementia, and the incipient general paralysis of the insane The treatment adopted by White is similar to that employed by other alienists

3 **Cerebellar Abscess.**—Rawling reports a case of abscess of the cerebrum, occurring in a man aged 21, who had been suffering from a purulent discharge from the left ear for four months, pain in the ear then developed, and two weeks later chronic frontal headache There also was inability to close the left eye completely, and the face was drawn over to the right side The mastoid antrum was exposed and found full of cholesteatoma The extradural space was exposed and examined, but without result Although the patient felt better afterward, the previously existing optic neuritis increased and vomiting of the cerebral type occurred At a second operation the antero lateral aspect of the cerebellum was exposed and an abscess cavity was found one inch from the surface One ounce of greenish pus was evacuated and the cavity adequately drained. The patient regained excellent health, but complained of pain over the left occipital parietal region and of inability to see objects in the right visual field The gait was also slightly staggering and there was a decided tendency to lurch toward the left side when standing with the eyes shut There was no evidence of optic atrophy

4 **Enucleation of Prostate**—Frever reports a further series of 119 enucleations of the prostate for enlargement of that organ, making a total of 309 cases in which he has operated In connection with these 119 operations there were nine deaths The causes of death were jaundice (case complicated by malignant disease of liver), pulmonary embolism, shock and uremia (six cases in which the kidneys were extensively diseased before operation) . The ages of the patients varied from 50 to 86 years, the average age being about 68

5 **Tetanus Treated with Antitetanic Serum.**—Hall, Carter and Howard each report a case of tetanus successfully treated with antitetanic serum

6 **Staining of Animal Parasites.**—The method of staining animal parasites devised by Hall is described as follows

1 Prepare a film of the blood feces or sediment of the secretion Fix by heat, or less preferably by formalin vapor
2 Treat the film with the following solution from one-half minute to 2 minutes Watery methylene blue 1 per cent 100 c.cm glacial acetic acid 5 c cm (Neisser s methylene blue solution may be equally well used if at hand. Methyl violet, Nile blue etc are not so good)
3 Wash in water
4 Cover the film with saturated alcoholic eosin solution Allow to stain for from 5 to 10 minutes, or heat over the flame, blowing out the alcohol each time it catches fire, until the film is almost dry
5 Wash in water
6 Fix in potash alum solution for from one-half minute to 2 minutes.
7 Decolorize in 90 per cent. alcohol until a uniformly pink color obtains
8 Wash in water, allow to dry, mount in Canada balsam

It is the treatment with acetic acid which affects the outer coverings of the ova, embryos and parasites, and allows the stain to permeate the entire structure

The Lancet, London

March 9

8 Pyorrhea Alveolaris K W Goadby
9 Kala Azar, Its Differentiation and Epidemiology L. Rogers.
10 *Insanity, with Special Reference to Prognosis A R Urquhart.
11 Postoperative treatment of Congenital Hip Dislocation J J Clarke.
12 *Uterine Fibroids A. E Giles
13 Operative Treatment of Traumatic Psychosis B Hollander
14 National School for Consumptives C H Garland and T D Lister

10 **Insanity**—Of 110 alcoholic cases investigated by Urquhart nearly 43 per cent were hereditarily predisposed to insanity, and nearly 23 per cent to alcoholism Out of 40 cases of general paralysis 23 were undoubtedly syphilitic and 14 were alcoholic. The author's experience leads him to believe that the hereditary factor is of importance in general paralysis Among his 40 cases the heredity of insanity found expression 10 times, eccentricity 4 times, neurosis 12 times and alcoholism 14 times Rheumatism, gout and tuberculosis were also noticed There was a distinct neuropathic heredity in 32 cases There were only five cases of ordinary, uncomplicated epilepsy and 11 of alcoholic epilepsy Urquhart concludes that the innate or hereditary cases of insanity terminate in recovery in fair proportion, although they are more subject to relapse than cases in which the insanity is acquired. He finds that the average age on admission for men is 36 years, and the age of death 54 65 years, as against 63 96 for healthy males The average age on admission for women is 38 years, and the age of death is 60 93, as against 66 83 for healthy females Of 809 patients 31 14 recovered, in 38 93 the condition remained stationary, 17 3 died

12 **Observations on Uterine Fibroid.**—Giles claims that the doctrine that the menopause is Nature's cure for fibroids is a mischievous tradition He summarizes his reasons for this belief as follows

1 The ostensible menopause is delayed in cases of fibroids and menstruation—or, at least, uterine hemorrhage—may continue for years after the usual age of the menopause has been passed mean while the severe losses of blood may imperil the patient s life, or impair her health so seriously that many years will be required to recover the lost ground
2 The cessation of hemorrhage when it does occur does away with only one of the dangers incidental to fibroids, and the patient may remain for many years disabled by pain and by the weight of the tumor
3 The time of the menopause has its own special risks in relation to fibroids the most important are degenerative changes in the tumors and injurious pressure effects when a tumor which has occupied an abdominal position atrophies just sufficiently to allow of its falling into and filling the true pelvis
4 When in the vain hope that the menopause is going to work a cure operation has been delayed year by year and then has to be undertaken in spite of complications and of the enfeebled state of the patient, the danger of a fatal result is materially increased

Journal of Tropical Medicine and Hygiene, London

March 1

15 Case of Black Water Fever Occurring After Twenty three Years Residence in Central Africa R Howard
16 *Occurrence of Hymenolepsis Nana in the United States W H Deaderick Marianna Ark
17 *The Actinic Theory of Sunstroke A. Duncan

16—See THE JOURNAL, Dec. 22, 1906, page 2087

17 **Actinic Theory of Sunstroke.**—Duncan believes that the actinic theory of sunstroke is the correct one He urges that soldiers' helmets should be lined with orange red, that their khaki coats should have a detachable strip of orange red underneath the material along the spine, and that the men should wear shirts dyed this color

Intercolonial Medical Journal of Australasia, Melbourne

January 20

18 Miner s Disease W Summons
19 *Case of Acute Suffocative Pulmonary Edema A E. R White
20 *Acute Hemorrhagic Pancreatitis R. H Russell
21 *Cases of Surgical Interest. W Moore

19 **Acute Suffocative Pulmonary Edema**—The treatment employed by White in his case proved most effective Nothing was known of the history of the patient, a man except that he had vomited several times on his way to the hospital He was given strychnin and inhalations of oxygen and amyl nitrite without any apparent relief of the dyspnea or any lessening of the degree of cyanosis He was then given morphin, gr 1/6, with atropin, gr 1/100, and in about ten minutes improvement in his condition was noted Fifteen ounces of blood were then extracted from one of the veins of the forearm During the venesection the patient rapidly improved and regained consciousness The man was kept in bed, dieted and given potassium iodid in doses of from 20 to 30 grains, three times a day He recovered from this attack, but about five months later he returned with another attack The same treatment was carried out as before, with the same result

20 **Acute Hemorrhagic Pancreatitis**—Russell reports an instance of this kind, which simulated intestinal obstruction so closely that the diagnosis was made accordingly Operative intervention carried the case to a successful end.

21 **Cases of Surgical Interest**—The cases reported are as follows Two cases of appendicitis in which the omentum was wrapped around a sloughing appendix, two cases of fracture of the femur, with fracture of the upper end of the humerus

Glasgow Medical Journal

March

22 *Ankylosis of Spine W K. Hunter
23 Value of Tuberculo-Opsonic Index in Diagnosis E T Fraser
24 *Case of 'Spider's Lick D H Macphail
25 *Fracture of Rib by Sneezing H E Jones

22 **Ankylosis of Spine**—The outstanding feature of Hunter's case, a man aged 48 years, was the rigidity and immobility of the vertebral column, but associated with that was a generalized muscular atrophy as well as contractures of the adductors of the humerus and the flexors of the knee He regards the case as one of rheumatoid arthritis

24 **Spider's Lick**—MacPhail reports a case of eruption on the forearm due to contact with a spider The whole of the affected area was red and raised above the general surface There were numerous small pustules There was no pain Itching was present at first, but soon disappeared A carbolic acid dressing, 1 40, was applied and on the following morning the eruption had disappeared In India this condition is known as spider's lick

25 **Fracture of Rib by Sneezing**—Jones reports a case of fracture of the tenth rib, which the patient thought was the result of a very violent sneeze No other cause for the fracture could be discovered

Annales de l'Institut Pasteur, Paris

Last indexed page 649

26 (XXI No 1 pp 1 79) *Treatment of Experimental Infection from the Trypanosoma gambiensis (Inf exp à Tryp gambiense) F Mesnil M Nicolle and P Aubert.
27 Action of Bile on Pneumococcus and Other Bacteria (Action de la Bile) M Nicolle and Adil Bey
28 Sero Immunity to Bile Salts (Séro immunité vis a vis du choléate de soude) M. Nicolle
29 Antimalaria Campaign in Algeria (Etudes épidémiologiques et prophylactiques du paludisme) E and E. Sergent
30 *Ocular Manifestations of Trypanosomiasis (Manifestations oc au cours des trypanosomiases) V Morax
31 Anaërobic Microbes of Drinking Water (Etude bact. des eaux potables) H Vincent
32 Dosage of Isobutyric and Valeric Acids (Application de la méthode de distillation fractionnée de Duclaux à la recherche et au dosage des acides isobutyrique et valérique normal) A Lasserre

26 **Treatment of Experimental Trypanosomiasis**—This article relates the results of extensive experimental research on trypanosomiasis induced in rabbits, dogs, monkeys, etc and treated with various stains and a preparation of arsenic The writers do not state that any of the numerous animals in their experiments were cured by the drugs, but they add that such is their impression in regard to the monkeys and to the majority of the rats and other animals [Ehrlich has recently announced that trypanosomes gradually acquire an artificial immunity to certain drugs when treated with them for some time He was able to demonstrate this for 18 different chemicals belonging to the trypan group the arsenic group and the basic aniln stain group, producing fuchsin proof, trypan red proof and a number of other similar strains of trypanosomes This acquired property of artificial immunity to a certain chemical was retained by one strain through 92 passages through animals He found further that when a strain had become thus immunized against a certain chemical, another chemical might be able to act on it with primal power—in case sufficient amounts were used—and the trypanosomes would be rapidly annihilated He draws the conclusion that a combination of some of the various remedies from these three groups of chemicals found effectual against trypanosomes might cure the trypanosomiasis where a single one would fail Laveran, van Campenhout and Kopke have also reported experiences showing the advantage of combining strychnin with arsenic in treatment of sleeping sickness—Ed]

30 **Ocular Manifestations of Trypanosomiasis**—Morax calls attention to the frequency and the special characteristics of the ocular manifestations in the course of infection with trypanosomes The finding of an interstitial non ulcerative keratitis, in an animal, suggests the possibility of a trypanosome infection This interstitial keratitis is the work of the trypanosomes proliferating in the spaces between the layers of the cornea Their proliferation induces infiltration of leucocytes and may entail complete disorganization of the cornea, or the lesions may heal, leaving scarcely a trace The latter condition is observed in animals that display marked resistance to trypanosome infection This was observed particularly in goats infected with dourine or nagana Dogs, on the other hand, always died while the cornea was still completely opaque

Bulletin de l'Académie de Médecine, Paris

33 (LXXI No 6 pp 181 242) *Program for International Congress of Penitentiaries at Washington in 1910 (Congrès pénitentiaire internat) Magnan H Monod and Motet.
34 *Infection from Oysters (Epidémie de fièvre typhoide et d accidents gastro-intest. consécutive à l ingestion d huitres) A. Netter
35 *Prevention of Injury from Fire-damp and Carbonic Oxid. (La lutte contre le grisou et contre l oxyde de carbone.) N Gréhant
36 (No 7 pp 243 278) Treatment of Muscular Atrophy After Joint Effusions by Systematic Muscular Exercises with Progressive Resistance (Atrophies musculaires) Rochard and Berger
37 *Nomenclature of Diseases (Nomenclature des maladies) Fernet.
38 (No 8 pp 279-312) Three Cases of Tuberculosis Affecting the Muscles. (Tuberculose musculaire Myosite tuberculeuse.) Kirmisson and Cornil Commenced in No 6
39 *Malaria in Madagascar (Epidémie de paludisme 1909) Kermorgant, Blanchard and Kelsch.

33 **Program for International Congress of Penology**—The French government commissioned the Académie to suggest topics for discussion at the next international congress of penology, to be held at Washington in 1910 The committee to which the matter was entrusted suggests three topics "The advisability of adding to the law course a course on elementary psychiatry to enable lawyers and judges to be better equipped for passing judgment on the criminal in sane Physicians of penal establishments should be thoroughly trained in psychiatry, to enable them to estimate the mental condition of the prisoners in their care Systematic surveillance by an expert psychiatrist would disclose the cases of insanity developing in the prison, and enable their cure by treatment in appropriate institutions, and it would also supply a basis for rectification of errors in judgment and the revision of sentences imposed on the irresponsible" The second question suggested for discussion is "The advisability of creating special establishments, intermediate between the prison and the insane asylum, in which criminals can be interned when there is doubt as to their mental responsibility, the duration of their stay in the establishment to be determined by the improvement in their mental condition They should not be discharged without a legal decision to that effect based on the advice of a special committee" The third question refers to the advisability of complete suppression of all alcoholic drinks in case of convicts addicted to alcohol

34 **Severe Gastrointestinal Infection from Oysters.**—An epidemic of 125 cases of severe gastrointestinal disturbances is described, traced to infection from oysters Th[illegible]ses were distributed through fourteen towns [illegible] all the persons affected had partaken com[illegible]

ters from a certain oyster bed In 33 persons typical typhoid fever was observed, ending fatally in 7 In other cases a hectic fever simulated acute tuberculosis Even when the disturbances were limited to colic, diarrhea and vomiting, they did not occur at once, but an interval of from 24 to 48 hours elapsed In some cases there was much somnolence, weakness, and, especially in children, a syncopal condition with profuse sweating Epistaxis was observed in many instances The gastrointestinal disturbances generally subsided in a few days, but in some cases they persisted for several weeks and the patients were long in recovering In 3 of the cases a choleriform diarrhea with anuria proved fatal The troubles observed were evidently due to mixed infection In 1896 the Académie recommended that all oysters from suspicious oysters beds, a week before being offered for sale, should be transferred to some point along the coast, where they would be laved with pure sea water, not so much for the purpose of rinsing the oysters as to promote phagocytosis, and thus to cause the destruction of micro organisms lurking in the oyster organism or their expulsion in the excreta or by the action of the ciliated epithelium The vital processes in the oyster in contaminated waters are sluggish, but they start up with amazing energy when the oyster is transferred to pure sea water

35 **Fire-Damp and Carbonic Oxid.**—Grehant urges that the air in mines should be tested for the presence of fire damp night and day, and has devised a simple means for determining its presence with the "eudiometer," slightly modified He also calls attention to the extreme toxicity of water gas, stating that 22 c.c of dry carbonic oxid were obtained from 100 c.c of red blood from the inferior vena cava of a dog which had died in 33 minutes after breathing a mixture of 204 liters of pure air and 6 liters of water gas containing 40 per cent carbonic oxid In another experiment, a dog was made to inhale a mixture of one liter of illuminating gas in 299 liters of ordinary air for an hour About 2 8 c c of carbonic oxid were obtained from 100 c c of the animal's blood afterward This experiment shows the danger from leaking gas fixtures, as 1 per cent of gas in the air caused the passage of nearly 3 c c. of carbonic oxid into 100 c.c of blood Water gas, he says, contains seven times as much carbonic oxid as ordinary illuminating gas

37 **Suggestions for New Nomenclature for Diseases**—THE JOURNAL, March 2, 1907, p 838, mentioned Lancereaux's suggestions in regard to a new classification and nomenclature diseases A committee was appointed to study the subject, comprising Lancereaux, Blanchard, Jungfleisch, Reclus and Pernet The committee accepted Lancereaux's 3 classes and added 2 more, the "psychonoses"—affections caused by moral or mental agents, and "trophonoses"—affections caused by agents of nutrition All diseases can be classified in these 5 groups Physical agents—physinoses, chemical agents—cheminoses, animate agents—bionoses, mental and moral agents—psychonoses, and nutritional agents—trophonoses The latter group includes all the affections resulting from nutritional disturbances, whether due to excessive or defective nourishment, insufficient or ill regulated physical exercise or vitiated air These diverse causes induce a dyscrasia of the blood and organic lesions which may develop at almost any point, causing changes in the vascular or digestive system, in the liver or kidney, in the central or peripheral nervous system or plethora and vitiation of the blood They are not only the direct causes of various diseases—gout, chronic rheumatism, diabetes, kidney and gallstones and sclerosis of the viscera—but they impress a special stamp on accidental affections of various origins which may supervene on a soil thus modified by the diathesis inherent to the individual. The rôle of the nervous system in some of these trophonoses is undeniable, but the trouble in the nervous system is a result of the general or partial dystrophy This same diathesis is also responsible for certain hypertrophies or atrophies, arrests of development, deformities and tumors resulting from local nutritional disturbance, such as cancers, fibromata, lipomata and certain cysts The term "pathy" the committee adds should be retained to designate the local manifestations of any of the above 5 groups of agents, and if the adjective designating the cause is added, the term thus becomes explanatory while localizing the trouble, as, for example, syphilitic dermopathy, alcoholic gastropathy, rheumatic cardiopathy The advantages of a new nomenclature based on the above principles are extolled by the committee, and especially the tendency to direct the mind constantly toward the etiology of the affection in question When, the etiologic conception of an affection is constantly impressed on the mind it bears fruits in the lines of prophylaxis, of hygiene, both moral and material, and of treatment. Blanchard added that in parasitology an etiologic nomenclature has already made great progress He has long used the terms "zoösis" and "bacteriosis" to take the place of mycosis and similar terms Uncinariosis and babesiosis are proper terms, he declares, for the affections incorrectly called ankylostomiasis and piroplasmosis (the latter due to the Babesia bovis) The latter terms were introduced long after the others had been established in the literature and had proved their correctness and usefulness

39 **Malaria in Madagascar**—It is stated that malaria is more prevalent in Madagascar than ever before, and that the condition is becoming serious It is impossible to petrolize the rice fields which are the main source of support for the natives, and it is equally impossible to screen the native huts Blanchard urges the government to distribute quinin and to insist that all workmen on public or private works must take a daily preventive dose, given by the proprietors or contractors of the works, who should be supplied with quinin at cost price by the government It is stated that out of a population of 35,000, Tananarivo had 18,000 ill with malaria last June

Presse Médicale, Paris

40 (XV, No 11 pp 81 88) *Imaginary Seasickness (Le mal de mer d imagination) E Regnault
41 *Interauricular Insufficiency (Insuff inter auriculaire.) H Roger
42 Cells in the Effusion of Epidemic Cerebrospinal Meningitis (Cellules de l'exsudat) Speroni
43 The Vibro-Suppressor (Nouvel instrument pour la percussion topographique.) A Abrams
44 (No. 12 pp 89-96) Clinical Exploration of the Colon (Exploration du colon.) J Okinczyc.
45 Mechanism and Action of Thermocauterization (Cautérisation ignée) P Desfosses and A. Martinet.
46 (No 13 pp 97 104) The History of Electrolytic Introduction of Drugs (Introduction electrolytique médicamenteuse) A Zimmern
47 Protecting Function of the Liver Against Toxic Substances from the Intestines. (Fonction protectrice du foie.) G A Petrone and A Pagano
48 Passive Congestion in Treatment of Atonic and Phagedenic Ulcers on the Limbs. (Méthode de Bier etc.) M Bruns
49 (No 14 pp 105-112) Study of Process of Degeneration of Nerves. (Nature intime du proc. de dégénérescence des nerfs) G Marinesco
50 *Dangers of Habitually Eating Too Much (Suralimentation habituelle) M and H Labbé
51 (No 15, pp 113 120) The Uniform for Physicians of all Armies (Uniforme des médecins militaires) A Epaulard
52 Principles of Artificial Feeding of Infants. (Elevage au biberon) P Londe.
53 Prevention in Army of Contagion of Typhoid Fever from Urine. (Bidons démontables) Bonnette
54 (No 16, pp 121 128) Scopolamin and Spinal Anesthesia for Laparotomies. (Rachistovaine et scopolamine.) Chaput
55 Local Treatment of Gumma with Injections of Potassium Iodid. (Gommes syphilitiques et injections locales d iodure de pot.) F Trémolières
56 (No 17 pp 129 136) *Electric Sleep (Le sommeil électrique) S Leduc.
57 Systematic Treatment of Attack of Influenza (Grippe chez un adulte) A Martinet

40 **Imaginary Seasickness**—Regnault has had much experience as ship physician, and points out the necessity for differentiating between actual somatic seasickness, and that which is exclusively the work of the imagination, as prognosis and treatment differ for the two forms As a rule, in the imaginary variety the symptoms are more pronounced and more persisting They may be accompanied by some unusual symptom which gives the clue to the imaginary character of the affection, sometimes the two forms are associated It has been said that the smell of the ship, the sight of the movement of the ship and waves, and the noises of the machinery are the causes of seasickness, but the fact that the blind the deaf and those who have lost the sense of smell are liable to suffer from seasickness, shows that persons affected by these conditions suffer more from their imagina

tion than from the reality This is also the case in the sea sickness that comes from seeing others affected Patients with imaginary seasickness require entirely different treatment from the other variety, emphasizing the psychologic element. These are also the cases that call for the most sympathy and in which the condition has hitherto been deemed incurable

41 Communication Between the Auricles.—Rogers describes 2 cases of what he calls insufficiency of the inter auricular valve So long as the pressure in the left auricle is higher than that in the right, the valve keeps the abnormal opening closed, and the two auricles are separate and independent. But when the pressure in the right auricle is higher than that in the left, the valve opens and the venous blood mixes with the arterial. He diagnosed the condition in one case as nothing could be found in the heart or lungs to explain the excessive cyanosis and asphyxia The patient was a man of 44, subject to recurring bronchitis every winter, rapidly inducing asphyxia and cyanosis After the age of 30 he noted that he "got out of breath" easily on slight exertion, but was otherwise healthy In the second case a man of 54 presented intense cyanosis accompanying recent bronchitis after old emphysema. As the bronchial affection healed, the cyanosis subsided It reappeared, however, for a few minutes after every violent effort or fit of coughing Each time that the insufficiency recurs in such cases the restoration to normal is slower and less complete.

50 Hygiene of the Table—Labbé discusses the hygiene of the table and advocates four meals a day Breakfast, he says, should be a warm, substantial meal to repair the tissues and produce energy for the morning's work At noon, a light, easily digested lunch should supply the energy needed for the afternoon's work without making such demands on the system as to interfere with muscle and brain work At 5 o'clock another light meal should be taken, supplying energy while waiting for the last meal of the day This, the dinner at 7 or 8, should not be an elaborate meal, but a simple and short repast. As work is over, and as the expenditure of heat is less at night than during the day, the dinner does not have to produce much energy, but should serve merely for repair of tissue The lightness of this repast enables the individual to retire soon after, without interfering with digestion or having his sleep disturbed Labbé recognizes that this arrangement of meals conflicts with customary usages in France, but the first duty of the physician who strives to inculcate the principles of alimentary hygiene is to warn against habitual table excesses, and the present three or two meal a day plan generally leads to overeating at one or more of the meals

56 Electric Sleep—This is the term applied by Leduc to a condition in which all sensation is abolished and the individual lies in complete lethargy as the consequence of the passage through the brain of an electric current The current used differs from those usually employed, in that it is constantly interrupted, a special device—of which he gives an illustrated description—allowing the current to pass, then interrupting it for a period nine times as long, then allowing it to pass again, always in the same direction, a hundred interruptions being made in the course of a second The electromotive force should not be much above the low maximum desired, which renders storage batteries better for the purpose than the urban electric light service The peculiar properties of this interrupted current, he states, have shown that it is far superior to all other means for exploration of the sensation, excitability, contractility, etc., in physiologic and pathologic conditions Its proper use in these lines, he is convinced, will soon be rewarded with an abundant harvest of new facts When this electric current is gradually turned through the brain of a dog or other animal he passes gently, progressively, and without a sign of resistance or pain, into a condition of cerebral inhibition analogous to the sleep of chloroform Except for the preservation of the reflexes, especially if the spinal cord is not in the path of the current, the animal does not react to any stimuli, but seems to be in a condition of absolute general anesthesia, all kinds of operations can be performed and no reactions are observed any more than with profound chloroform anesthesia To induce this electric sleep in the rabbit from 6 to 8 volts are necessary, giving 1 or 2 milliamperes in the intermittent circuit, which corresponds to 10 or 20 milliamperes in a circuit without the interruptions The moment the current is turned off, the animal gets up, looks tranquilly around, manifesting neither suffering, fatigue nor fright, and as soon as he is relieved of the electrodes he frisks about gaily and eats with relish. No by-effects were ever observed, no vomiting, and only rarely a slight degree of stupor The dogs submitted to the maneuvers without fear or resistance, even when repeated again and again. The action of the heart and lungs continues unmodified, even when the passage of the current is continued for nearly 5 hours, as he shows by tracings taken before, during and after such experiences The instantaneous cerebral inhibition caused by closing the circuit always induces in animals the evacuation of the intestines and bladder The blood pressure is high during the entire experience This form of current abolishes first the functions of the higher centers, and not until later those of the heart and respiratory organs For this reason Leduc thinks that this form of current would be much more humane than those usually employed for electrocution Only two experiments on man have been made with this new interrupted current, and both were on Leduc himself, the results confirming in every respect those anticipated from observation of its workings on animals The inhibition first affected the centers of speech, then the motor centers, the limbs without being completely relaxed were not stiff The pulse was not affected, but respiration was a trifle impeded When the current had been turned on to the maximum he was conscious, as in a dream, of what was going on around him, and could perceive contact, but with deadened sensation. The consciousness of the dissociation and successive suppression of the various faculties was like the impression in a nightmare in which one is unable to speak or move in the presence of a grave danger On both occasions the experience was not pushed to the complete suppression of all consciousness, his assistants thinking each time that this stage had been reached, when they were just short of it The voltage was 35, the milliamperage 4, and each time he was under the influence of the current for 20 minutes When the current was turned off the awakening was immediate and complete, leaving no by effects except a sensation of physical vigor, so that he was able to proceed at once to deliver a lecture It is possible also with this current, he says, to induce complete local anesthesia, so that with the eyes shut it is impossible to say whether the region is being pricked, pinched or cut Using a more powerful current, he was able to induce a typical epileptiform convulsion in animals About 55 volts accomplished this in the rabbit, but 110 volts were necessary for dogs

Archiv f Verdauungs-Krankheiten, Berlin.

58 (XII No 5 pp 367-480) Roentgen Diagnosis of Gastric Ulcer (Neue Methoden zur Diagnose des Magengeschwürs) J C Hemmeter
59 Physiologic Importance of Mucus (Bedeutung des Schleimes) W Zweig
60 Splenomegaly with Cirrhosis of the Liver (Bantische Krankheit.) M. Einhorn.
61 Shape of the Esophagus in Relation to Physiologic and Pathologic Conditions. (Konfiguration des Oesoph) W Telemann
62 *Achylia Gastrica and Gastric Secretion in the Elderly (Beschaffenheit der Magensekretion im höheren Lebensalter) M J Liefschütz
63 (No 6 pp 487 588) *Experimental Study of Action of Alcohol on the Stomach. (Wirkung des Alkohols auf den Magen) L Kast
64 Conditions of Secretion in the Stomach According to Findings in Dogs. (Sekretionsbedingungen des Magens) W Gross.
65 *Influences that Inhibit the Healing of Gastric Ulcer (Heilung des Magengeschwürs hemmende Einflüsse) F Tecklenburg
66 *Diagnosis of Carcinoma of the Stomach (Diagnose des Magenkarzinoms) A Zirkelbach

62 Achylia Gastrica—Liefschütz announces that in his tests the secretion of the stomach in persons who have passed their fiftieth year showed a marked tendency to diminution He states further that complete absence of free hydrochloric acid is relatively not a rare phenomenon in old age In investigating the digestive power of the gastric juice by the

method of Mett, it should always be tested both without and with the addition of hydrochloric acid The digestive power in cases of achylia produced by carcinoma of the stomach is not improved by the addition of hydrochloric acid. The aspect of the stomach contents and of the filtrate is often instructive He adds that in examining the stomach contents the possibility of the passage of the so called natural mixture, that is, a mixture of intestinal juice, pancreatic juice and bile, into the stomach must be kept in mind The occasionally observed presence of pancreatic juice in the stomach affords a new means for the study of pancreas digestion and its disturbances Gastric digestion is far from being so simple as it might have been assumed from previously known facts There is no reason, he says, for separating simple achylia gastrica as an independent clinical entity with definite etiology Its origin should be determined in the interests of effective treatment as well as in reference to prognosis

63 **Action of Alcohol**—Kast concludes as the result of experiments on a dog after the method of Pawlow and on a girl with a gastric fistula, after resection of the espohagus, that alcohol increases the amount of gastric juice, but does not affect the percentage of HCl, while the amount of pepsin is reduced. In a strength of 10 per cent, or less there is no noticeable local irritation from the alcohol, but when the proportion is above 20 per cent local irritation is pronounced Continued use of dilute solutions produces at first hyperchlorhydria, then catarrh with gradual decrease of acidity The occurrence of hyperchlorhydria is explained by the fact that the increased quantity of the secretion mixed with the food gives an increased average acidity In his experience, alcoholic drinks containing less than 20 per cent. of alcohol favored motility and absorption, and did not materially reduce peptonization

65 **Ulcer of the Stomach.**—Tecklenburg concludes from his research that a number of relapses in case of gastric ulcer are due to overstretching of the walls of the stomach The most important cause of this overdistension is muscular atony and the swallowing of air He concludes that if such ulcers do not heal under the ordinary measures gastroenterostomy should be resorted to

66 **Gastric Carcinoma.**—Zirkelbach has tested Salomon's method of diagnosis of cancer of the stomach in 10 cases of carcinoma and 37 of other diseases, and is convinced that it is reliable for the early diagnosis of cancer of the stomach. The method consists in washing out the stomach in the evening and then on the following morning introducing 400 c c of normal salt solution This solution is removed after a short stay in the stomach and tested for the presence of albumin and for the proportion of nitrogen Marked turbidity with Esbach's reagent (picric acid) or the presence of more than 30 mg of nitrogen indicates the presence of carcinoma

Centralblatt f d. Grenzgebiete der Med. u Chirurgie, Jena.
Last indexed, XLVII, page 1002

67 (IX Nos. 17 23 pp 641 928) *Syphilitic Febrile Tertiary Visceral Affections (Fieb tertiär syph. Organerkrankungen) H Raubitschek. Collective review of the literature.
68 *Tuberculin in Diagnosis and Therapeutics (Diagn. und therap Anwendung des Tub) G Weiss Collective review
69 *Old and New in Rachitis (Altes und Neues uber Rachitis) D G Zesas
70 *Scoliosis in Sciatica. (Ischias scoliotica) E Oberndörffer Collective review
71 *Literature on the Gall Bladder and Biliary Passages During the Last Decade (Lit. der Gallenblase und der Gallenwege) A. v Bardeleben
72 *Leukemia and Pseudo-leukemia of the Skin (Leucaemia und Pseudoleucaemia cutis) L. Isler Collective review
73 *Value of Lumbar Puncture in Diagnosis and Treatment (Diagn und therap Wert der Spinalpunktion) W Kaupe. Collective review

67 **Febrile Syphilitic Affections of Various Organs**—Raubitschek reviews 35 publications on this subject and emphasizes the necessity for bearing the possibility of a syphilitic affection in mind when confronted with a persistent hectic fever of dubious origin Syphilitic affections of the liver, lungs and other organs may run their course with only slight or vague symptoms attracting attention to the organ. On the other hand, a febrile, acute tuberculous affection of the lungs may lead to a fatal termination in a syphilitic without the lues being directly responsible for it In some of the cases reported an exploratory incision revealed a gummatous affection of the liver or other organ, and all symptoms subsided under mercurial treatment. The syphilitic affection may simulate acute articular rheumatism. In Klemperer's case a man of 30 had suffered for months from fever with a slight chill every evening, followed by sweating Long continued quinin treatment gave no relief, but mercurial injections had an astonishing effect The liver and spleen returned to normal size, the fever vanished, and the patient has been in good health since

68 **Tuberculin in Diagnosis and Treatment**—About 350 articles are reviewed by Weiss without drawing any definite conclusions from the data presented by the various authors, although the important points are discussed in turn.

69 **Old and New in Rachitis**—Zesas' article was commenced in No 9 and is concluded in No 18 of this publication He cites Heubner, Bokai, Troitzky, Rauchfuss and others as advocates of phosphorus in treatment of rachitis, especially in combination with cod liver oil, the results obtained surpassing those recorded from any other means of treatment Cod liver oil without phosphorus is sometimes given in small doses, a teaspoonful or two during the meals Lime seems to be ineffectual, but when the child has started on the road to recovery, and the osteoid tissue has become capable of taking up the lime, then its administration seems rational Stöltzner gives 0 5 gm calcium carbonate three times a day Lime water contains too little lime, less than the same amount of cow's milk Bernard has reported good results from administration of dog's milk. Iron preparations seem to do good service, especially in cases in which cod liver oil is not tolerated Medicated baths have also been found useful, especially those with sea salt Henoch has the legs rubbed with flannel during the bath and others have used massage with benefit Good results have also been reported from galvanization along the spine and from electric baths In extreme craniotabes the head of the child should be supported on a soft ring cushion Fueth has used to advantage an apparatus to ensure respiration of condensed air to combat the rachitic deformity of the chest. This not only benefits the bony frame, but also helps to develop the lung tissue. Rachitic kyphosis should be combated by having the child lie on a hair mattress instead of being carried in the arms, or a plaster cast may be used for young children and a Phelps bed for older ones Hoffa's experience has been that the children all recover in from two to three months if kept on a strict antirachitic diet, lying flat, with massage of the muscles of the back The position in which the child lies is important also in prevention of scoliosis He generally supports the spine in such cases with a corset Rachitic deformity of the leg is liable to subside spontaneously in the course of three or four years in children under six. In treatment, an apparatus with elastic pressure on the convex side and permanent traction on the concave side will be found most useful. The application of the apparatus requires such care on the part of parents to prevent decubitus that, as a rule, Hoffa advises operative treatment, manual osteoclasis, for young children, with instrumental osteoclasis for older children Macewen performed osteotomy ten times on one patient before the limb was brought to the desired shape

70 **Scoliosis Accompanying Sciatica.**—Oberndörffer concludes from his study of the various publications that have appeared on sciatic scoliosis that the most probable explanation of the scoliosis is from the extension of the disease process to the lumbar nerves This factor distinguishes sciatic scoliosis from that due to mechanical static stress Some writers mention the scoliosis as occurring in 90 per cent of their cases of sciatica, while others have observed it in 10 per cent or less

71 **Literature on the Gall Bladder and Biliary Passages**—More than 1,000 articles or books in various languages were consulted by von Bardenheuer in preparing his monograph describing his 286 operations for gallstones He here reviews the entire list, with brief summaries of the more important

points in turn as he cites the titles in full The titles are arranged alphabetically in two groups, the first containing the articles on the anatomy and physiology of the gall bladder and genesis of gallstones, and the second the articles on the pathology of the gall bladder and biliary passages since 1897 The list includes a number of inaugural theses, and is an international summary

72 **Leukemia and Pseudoleukemia of the Skin**—Isler analyzes 44 communications that have been published on the cutaneous manifestations of lymphatic leukemia or pseudoleukemia Most of the writers report their cases without decisive comment The cutaneous manifestations may be diffuse, suggesting eczema, or they may appear as tumors large or small, generally affecting the face and causing subjectively little disturbance, but accompanying the changes in the blood Similar manifestations may appear with violent itching, generally with the so called pseudoleukemia In other cases the cutaneous manifestations may be associated with or show a tendency to transformation into fungoid mycosis sarcomatosis of the skin or pernicious lymphoderma of Kaposi's type

73 **Lumbar Puncture.**—Kaupe discusses the diagnostic and therapeutic importance of lumbar puncture from analysis of 487 articles on the application of this measure in the clinic He states that the consensus of opinion has established the harmlessness of the measure if due precautions are taken Too large amounts of the fluid should not be allowed to escape and it should never be aspirated, and the measures should never be applied to an out patient Transient by effects such as hemorrhage, transient lesions of the nerves, headache, vertigo, vomiting, irregular pulse or pains in the limbs, have been reported by a few writers, and Remak urges restriction of the measure to certain indications Exceptional caution is necessary on suspicion of a tumor in the brain or in the cerebellum, on account of danger of hemorrhage in the tumor tissue, of variations in the intracranial pressure and of the shutting off of the fluid in the ventricle from the rest of the cerebrospinal fluid. In one case of otogenic meningitis no bad effects were observed, but in another case these were noted Lumbar puncture is generally harmless in tuberculous meningitis, but again it may hasten the fatal termination In case of hydrocephalus it can do no harm unless the foramen of Magendie is occluded. For diagnostic purposes lumbar puncture may prove of paramount importance Chemical tests for albumin may prove very instructive, apart from the knowledge gained in regard to the pressure of the cerebrospinal fluid. Its principal value, however, is for cytologic and bacteriologic investigation. As a rule, Kaupe says, polynucleosis is observed with acute and mononucleosis with chronic affections of the central nervous system, especially of the meninges Lymphocytosis is often an early and important symptom of progressive paralysis and tabes, and confirms the probable syphilitic etiology of tabes Bacteriologic examination of the cerebrospinal fluid is sometimes the only means of diagnosing epidemic cerebrospinal meningitis From the therapeutic standpoint, lumbar puncture is able to relieve and to improve threatening symptoms, at least temporarily and in many cases has a direct life saving and curative action A number of such instances of its beneficial influence were reported in the last epidemic of meningitis in Germany Epidural injection probably acts mainly by suggestion, but may sometimes be useful in this line

Münchener medizinische Wochenschrift

74 (LIV No 7 pp 305 352.) Mode of Action of Modern Therapy of Gonorrhea (Wirkungsweise der mod. Gonorrhoetherapie) K. Zieler
75 Etiology of Erythema Nodosum. (Erythema nodosum) W Hildebrandt
76 *Treatment of Diabetic Phthisis (Diabetische Phthise) O Thorspecken
77 The Silver Spirochetes" True Micro-organisms (Nerv oder Mikroorganismus?) H Bab
78 Bifocal Crystalline Lens (Linse mit doppeltem Brennpunkt.) G Freytag
79 Action of Uviol Lamp on the Skin (Wirkung des Uvioillichtes auf die Haut und deren therapeutische Verwendung in der Dermatologie) C Stern and Hesse
80 *Passive Hyperemia as Remedy for Seasickness (Bier sche Stauung bei Seekrankheit.) H Roesen
81 Field Hospital in Southwest Africa 1905 (Feldlazarett.) A. Lion
82 Seventieth Birthday of F A. Kehrer Heil

76 **Treatment of Diabetic Phthisis**—Thorspecken has had considerable experience with diabetics suffering from pulmonary affections, and has found that careful treatment gives excellent results The diabetes should be treated with the same energy as without the pulmonary complications In one case a tuberculous affection of the larynx healed as the patient, a man, was cured of the glycosuria He has since been in comparative health for 16 years In another case a bilateral tuberculous process in the upper lobes with much emaciation was so much improved under treatment of the diabetes that the patient, a physician, was able to resume his practice and has gained nearly 12 pounds in weight In another case the tuberculous process was primary, and in a long latent stage when the onset of the diabetes made it flare up again The course of this case shows how neglect of the diabetes in an active tuberculosis soon avenges itself, and it also shows the benefit on the tuberculous infection of effectual treatment of the diabetes

80 **Passive Hyperemia in Treatment of Seasickness**—Roesen has derived much benefit in seasickness from Bier's method of inducing hyperemia in the head by an elastic band around the neck His personal and clinical experience as ship physician showed that this measure was able to induce subjective well being, but had no influence on the tendency to vomit when the stomach was full When the stomach was empty, however, there was not the slightest tendency to nausea. The application of the elastic band must be individualized and must be supervised by the physician It is not necessary to keep it up during the night, when the patients are reclining

Zeitschrift f Geb u. Gynäkologie, Stuttgart.
Last indexed page 376

84 (LIX No 1 pp 1 204.) *Laparotomy for Chronic Inflammatory Affections of the Uterine Adnexa. (Adnexerkrankungen und ventrale Laparotomie.) P Esch
85 Diffuse Proliferation of the Mucosa into the Wall of the Uterus (Diffuse Adenome im Myometrium) Schütze
86 Artificial Sterilization of Women (Schützt die Anwendung der Darmmethode bei tubarer Sterilisation vor Rezidiven?) Offergeld
87 Peripheral Langhans Cells (Periphere Langhanszellen) O O Fellner
88 Elimination of Scraps of Tissue in Physiologic Menstruation (Anatomie der Menstruationsabgänge.) E von der Leyen
89 Cells of Chorion and Decidua. (Decidua und Chorionzellen) R Meyer
90 *Implantation of Ureter in the Bladder (Einpflanzung des Harnleiters in die Blase) K. Franz.

84 **Laparotomy for Chronic Inflammation in Adnexa.**—Esch relates the experiences at Olshausen's clinic with 83 cases of chronic inflammatory affections of the adnexa treated by a laparotomy The mortality was 7 2 per cent The open abdominal cavity was protected with sponges against the bursting of a pus pocket, and every effort was made to leave the abdominal cavity as dry as possible before suturing the incision, without rinsing or draining Olshausen says that any pus that can be seen during the operation can be readily wiped away and any that escapes observation must be in such small amounts that it could not be eliminated through a drain If the infectious fluid has poured out in such quantities that it has worked its way between the loops of intestines, then nothing is to be gained by drainage Rinsing out the cavity is liable to distribute the infectious material over a still larger surface, he thinks He operates only in an interval period, and not until nine months after the date of infection, trusting that the bacteria have perished by this time In three instances there was a communication between the pus pocket and the vagina, illustrating the complete failure of palliative treatment by mere incision in case of suppurative affections in the adnexa

90 **Implantation of Ureter in Bladder**—Franz reports 15 cases in which the ureter was implanted in the bladder His technic was worked out on the cadaver and on animals He found it necessary to avoid crushing the ureter at any point and to use as little suture material as possible He has performed the operation in 20 cases, but in five the patients succumbed to the effects of cancerous degeneration and they are not included in this report In one of the other cases one ureter was severed in the course of an abdominal operation for removal of uterine cancer, and the ureter was implanted in the bladder, in another case the operation was for removal of a

cancer in the bladder, and in another of a myoma in the uterus Twice both ureters had to be resected and implanted in cancer operations, and in three instances a fistula between the ureter and vagina was cured by implanting the ureter in the bladder In another case the ureter was injured during a vaginal hysterectomy and had to be implanted in the bladder The results, both immediate and remote, of the operations on the ureters were extremely beneficial in most cases and did no harm in any instance In two other cases it proved impossible to implant the injured ureter in the bladder, and the kidney above had to be removed. The individual technic in each case is described in detail

Riforma Medica, Naples.

Last indexed page 841

91 (No 50 pp 1373-1400) *Pathogenesis of Gastric Ulcer and Its Importance for Treatment. (Ulcera gastrica.) G Marchetti.
92 Physical Signs of Presence of Gas in Pleural Effusions (Note di semeiotica fisica, etc.) M Landolfi
93 *Passage of Mercury Through Placenta (Passaggio del mercurio dalla madre al feto) A. Conti and P F Zuccola
94 (No 51, pp 1401 1428) Experimental Study of Chronic Poisoning from Nitric Acid (Avvelenamento cronico da acido nitrico) L Tomellini.
95 *Experimental Rabies in the Rat. (Rabbia nel ratto) T Mazzei.

91 **Pathogenesis and Treatment of Gastric Ulcer**—Marchetti calls attention to the fact that both the sympathetic and vagus are involved in the innervation of the stomach, and states that these two nerves are the ones that generally suffer most in nervous disturbances He has made a number of experiments on animals which confirm his clinical experiences and suggest that lesions in the vagus—the motor nerve of the stomach—causing local paralysis, entail stagnation of stomach contents at the part involved, with ulceration in time When the vagi are divided or ligated the motor function of the stomach is completely arrested and death is only a question of a few days Ligating the right vagus paralyzes only the right half of the stomach, and in his experiments the center of the paralyzed part soon showed the typical ulcer while the rest of the stomach remained normal The animals all vomited soon after eating, as do persons with an incipient ulcer He attributes this to excitation of the vomiting center from the mechanical irritation of the food at the seat of the incipient ulceration He thus explains ulcer of the stomach as the result of some change in the vagus interfering with the normal motor function of the part of the stomach innervated by the branch of the nerve in question Particles of food collect at this point, which ceases to share in the general peristalsis of the organ, and stagnation is sooner or later followed by ulceration He also states that treatment of ulcer of the stomach should aim to restore the injured vagus to normal, when the ulcer will heal of itself If this can not be done, then the only course is to excise the paralyzed portion as the conditions that induced the development of the ulcer persist and the ulcer is liable to be reproduced at any moment In his experimental research, ligature of one branch of the vagus, causing local paralysis of part of the stomach, was invariably followed in the course of about four weeks by the development of an ulcer, similar in every respect to simple, chronic gastric ulcer in man Gastroenterostomy always cured the ulcer in his animals, and he advocates it for severe cases in man as the ideal procedure.

93 **Passage of Mercury Through the Placenta.**—Conti has been studying this subject both in the clinic and in experiments on animals, and his conclusions are that mercury administered to the mother does not pass through the placenta to the fetus He believes, however, and his research seems to demonstrate the fact, that the mercury in the maternal organism causes the production of substances—antibodies—which are able to pass through the placenta to the fetus and to act on the specific agent of the disease, neutralizing its action.

95 **Experimental Rabies in the Rat.**—Mazzei relates experiences with rats inoculated with rabies which have convinced him that rats are much better adapted than dogs, monkeys or other animals for experimental study and control of the action of rabies virus and antibodies

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers

Anesthetics and their Administration A. Text book for Medical and Dental Practitioners and Students. By Frederic W Hewitt, M V O, M.A. M.D, Cantab, Anesthetist to His Majesty the King Third Edition with Illustrations. Cloth Pp 627 Price, $4 00 net. London and New York The Macmillan Co, 1907

Pediatrics. The Hygienic and Medical Treatment of Children. By Thomas Morgan Rotch, M.D, Professor of Pediatrics, Harvard University Fifth Edition Rearranged and Rewritten Illustrated. Cloth. Pp 1060 Price, $6 00 per volume. Philadelphia and London J B Lippincott Co, 1907

Histologic Observations on Sleeping Sickness and Other Trypanosome Infections By F W Mott, M D., F R.S (From the Pathologic Laboratory of the London County Asylums) Cloth. Pp 50 Price, $1 50 net. New York William Woods & Co, 1907

Aids to Diagnosis and Treatment of Diseases of Children By John McCaw, M D, R.U I., L.R.C.P Edin, Physician to the Belfast Hospital for Sick Children. Third Edition. Cloth Pp. 381 Price, $1 25 New York William Wood & Co, 1907

Text Book of Materia Medica for Nurses, Including Therapeutics and Toxicology By G P Paul, M.D, Attending Physician to Samaritan Hospital Troy N Y Cloth. Pp 242. Price, $1 50 net. Philadelphia W B Saunders Co, 1907

Psychology Applied to Medicine. Introductory Studies by David W Wells M.D., Lecturer on Mental Physiology in Boston University Medical School. Cloth. Pp 141 Price, $1.50 net. Philadelphia F A. Davis Company 1907

Dermatologische Vorträge für Praktiker Heft 7 Die ambulante Behandlung der Unterschenkelgeschwüre. By Dr Jessner Dritte Auflage. Paper Pp. 52 Price, Mk. 9 Würzburg A Stuber s Verlag (Curt Kabitzsch), 1907

Manual of Diagnosis and Treatment of Diseases of the Eye. By Edward Jackson, A.M M.D, Professor of Ophthalmology in the University of Colorado Cloth. Pp 615 Price $2 50 net. Philadelphia W B Saunders Co 1907

This Labyrinthine Life. A Tale of the Arizona Desert. By George Alexander Fischer, author of Beethoven A Character Study Cloth. Pp 382. Price, $1.20 New York B W Dodge & Co Chicago A. C McClurg & Co 1907

University of Pennsylvania. The Provost s Report for the Year Ending Aug 31 1906 Seventh Series No 3 Part 6 Paper Pp 298 Philadelphia Published by the University February, 1907

Aids to Dental Surgery By A. S Underwood, M.R C.S, L.D S., and D Gabell, M.R C.S L.R.C P L.D S Second Edition Cloth Pp 126 Price $1 00 New York William Wood & Co 1907

Annual Report of the Bureau of Health for the Philippine Islands. Victor G Heiser Director of Health July 1 1905-June, 30 1906 Paper Pp 150 Manila Bureau of Printing 1906

Aids to Medical Diagnosis By Arthur Whiting, M.D M.R.C.P Physician to the Tottenham Hospital Cloth Pp 152 Price $1.00 net. New York William Wood & Co 1907

Twelfth Report of the Board of Health of the Town of Montclair New Jersey From Jan. 1 1906 to Dec. 31 1906 Paper Pp. 76 New York Jones Printing Co, 1906

International Medical Annual. A Year Book of Treatment and Practitioner s Index. 1907 Twenty fifth Year Cloth. Pp 644 Price, $3 00 New York E B Treat & Co

Meckel's Diverticulum in Surgical Practice. (In Russian) Sixty two Illustrations By Prof. M. I Rostovtzeff. Paper Pp 154 St. Petersburg V C. Ettinger

Transactions of the Luzerne County (Pa.) Medical Society For the Year Ending Dec. 31 1906 Volume XIV Paper Pp 178 Wilkes-Barre E B Vordv Co 1906

Die Syphilis and der Tripper von Dr Orlowski Spezialarzt in Berlin. Pape. Pp about 40, each Würzburg A. Stuber s Verlag (Curt Kabitzsch) 1907

Ninth Annual Report of the Eastern Indiana Hospital for the Insane, for the Period Ending Oct. 31, 1906 Paper Pp 116 Indianapolis W B Burford.

Monthly Summary of Commerce and Finance of the United States January 1907 Paper Pp 1577 Washington Government Printing Office.

Transactions of the American Society of Sanitary and Moral Prophylaxis For the Year Ending May 31 1906. Vol I Paper Pp 166

Thirty third Annual Report of the Medical Director of the Cincinnati Sanitarium for the Year Ending Nov 30 1906 Paper Pp 18

American Society of Tropical Medicine. Papers Read before the Society and Published Under Its Auspices. Vol II, 1905-1907 Pp 500

Seventeenth Annual Report of St. Mary s Hospital Rochester Minn., for the Year 1906 Paper Pp 29 Rochester C. Elliott & Son.

Fifteenth Annual Report of the Board of Health of Spokane Washington for the Fiscal Year Ending Dec. 31, 1906 Paper Pp 25

Official Army Register for 1907 Published by Order of the Secretary of War Paper Pp 618

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Original Articles

INTERNAL HYDROCEPHALUS

WITH REPORT OF TWO CASES, ONE RESULTING FROM OCCLUSION OF THE AQUEDUCT OF SYLVIUS *

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It is by no means rare to find occlusion of the aqueduct of Sylvius as one of the etiologic factors in internal hydrocephalus mentioned in text-books dealing with this subject. Attention is particularly attracted by the fact, however, that no references are given in most of the articles which refer to this occlusion as a possible cause, whereby one can determine that the author is speaking from clinical experience and not theorizing

We have been struck with the *a posteriori* nature of discussions on this subject, and it is therefore with pleasure that we bring forward a case of internal hydrocephalus the cause of which is probably congenital almost total occlusion of the aqueduct of Sylvius

Anton,[1] in dealing with the causes of hydrocephalus, quotes Baginsky's opinion that acute hydrocephalus is identical with acute non-tuberculous inflammation of the choroid plexus and the following increase of exudation He adds that there is without doubt involvement of the ventricle walls and the ependyma He also advances the view held by Rindfleisch, Huguenin and Von Bonninghaus to the effect that the inflammatory affection of the ventricles and choroid plexus is always associated with a meningitis serosa or purulenta, and that these are caused by toxic or infectious factors Referring to Macpherson, he states as a possible cause an infectious phlebitis with thrombus formation of the venous sinuses He says that occasionally the exciting agent of the inflammation gains access directly to the v ntricle through the brain substance, with or without traumatism, and there sets up a fibrino-purulent process Lastly he calls attention to a possible connection between rachitis and hydrocephalus

Gowers[2] holds that the "only known cause" of acute hydrocephalus is meningitis Speaking of chronic internal hydrocephalus he makes this interesting statement "Sometimes all the ventricles are distended, more often the fourth ventricle suffers little even where there is no obstruction in the aqueduct of Sylvius In such a case the aqueduct may be funnel-shaped, dilated towards the enlarged third ventricle" This statement should be compared with the gross anatomical findings of our second case Gowers further mentions the possible obstruction of the veins of Galen preventing the return of venous blood from the intraventricular vessels and thereby becoming a cause Such a condition as this, if acute, is likely to cause ventricular hemorrhage and rapid death, as in a case reported by one of us (Spiller) with Wadsworth, but when developing slowly might be productive of internal hydrocephalus

Oppenheim[3] speaks of compression of the aqueduct of Sylvius as a cause of internal hydrocephalus D'Astros[4] states that an obstruction of the aqueduct of Sylvius will produce *une hydropsie* of the third and lateral ventricles, but he gives no instance of its so doing A Henle[5] says that a closure of the aqueduct of Sylvius will cause a hydrocephalus confined to the third and lateral ventricles, but he gives no reference to a case P Bourneville[6] speaks of "another case" of hydrocephalus caused by the obliteration of the aqueduct, but no further information is given F Schultze[7] mentions the possibility of hydrocephalus being caused by the obstruction of the aqueduct, and refers to Seeligmuller's cysticercus case which we cite below

Seeligmuller[8] speaks of a possible pressure on the aqueduct of Sylvius by a tumor causing hydrocephalus In the same work he gives the history of his case of hydrocephalus caused by the plugging of the aqueduct by a cysticercus the size of a cherry stone Apropos of cysticercus Karl Osterwald[9] has collected about thirty-four cases in literature of cysticercus in the ventricles of the brain, but in none of the cases given was the parasite in the aqueduct

Bonninghaus[10] gives as a cause of hydrocephalus, what he terms an "acute automatic closure" of the aqueduct of Sylvius By this he means that when the effusion into the third and lateral ventricles occurs rapidly, the more yielding portions of the third ventricle, i e, the floor and the roof, become displaced and pull from above and below on the more solid pons and in this way produce an elongation of the aqueduct which may result in complete closure

One of us[11] (Spiller) reported a case in which the third and lateral ventricles were dilated and the aqueduct was occluded by proliferation of the neuroglia Two other cases of partial internal hydrocephalus have come under his notice In one the distension was confined to one lateral ventricle of the brain and was caused by partial

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1 Flatau Handb path. Anat d. Nervensystems.
2. Dis. of the Nervous System.
3 Lehrb d Nervenkrankheiten
4 Les Hydrocéphalies 1898 75
5 Beitr z. Path. u Therap d Hydrocephalus
6 Brouardel Traité de Médecine
7 Nothnagel Specielle Pathol u Therap
8 Krankheiten d. Rückenmarks u Gehirns.
9 Beit. z. Diag d. Cysticercus Ventriculi Quartl Neurolog. Centrbl March 16 1906
10 Die Meningitis Serosa Acuta 1897
11 Am. Jour of Med. Sci., July 1902.

inflammatory closure of the foramen of Monro, in the other case only the posterior horn of the lateral ventricle was distended, and very greatly, from unknown cause In this case the occipital lobe of the affected side was a mere sac He also refers to a case of Bourneville and Noir,[12] in which the aqueduct was entirely occluded, but there was no microscopic study of the tissues In this same paper he (Spiller) speaks of Touche's case,[13] in which there was occlusion of the aqueduct

Our first case was reported by one of us (Spiller) without microscopic study[14] The history as obtained from the Pennsylvania Training School for Feeble-minded Children is as follows

Patient—Sally H, age 62 at time of death, American

History—Father died of consumption, aged 39, mother died aged 63, cause unknown, two brothers and two sisters died of consumption One sister (the first born) died in early infancy, cause unknown, two brothers are living in good physical and mental condition Of the details of the patient's birth nothing is known She was supposed to have been born hydrocephalic and was weak and sickly as a baby Sight, hearing and speech were good She had epilepsy for years and during her seizures would froth at the mouth and purge She suffered frequently from vomiting without assignable cause, and had occasional attacks of vertigo She was said to have chronic kidney disease six years prior to her death There was no paralysis at any time, and although no joint complication was present she always walked as though lame She was said by Dr Llewellyn, who had known her for years, to have been fairly well developed mentally Her advanced age and her mental condition are remarkable in view of the extensive hydrocephalus

Macroscopic Examination—The third and lateral ventricles of the brain were greatly dilated and the white matter surrounding them was intensely atrophied The whole cerebrum appeared as a greatly distended sac. The lateral ventricles freely communicated with one another, and the walls of the third ventricle were so pushed apart that the floor of this ventricle was on a level with the upper part of the basal ganglia

Microscopic Examination—Left Optic Thalamus The blood vessels were thickened and there were some recent hemorrhages within the substance of the thalamus All the vessels were distinctly congested There was little vacuolation of the cells of the choroid plexus such as described by Raubitschek[15]

Corpus Callosum A section from the median portion of this structure was not more than 1 mm in thickness, it stained normally and contained numerous amyloid bodies

Left Occipital Lobe In places the cortex and white matter were not more than 2 mm in thickness, in other places the thickness was 6 mm The atrophy was relatively much greater in the white substance than in the cortex Where the width of the section was the least, more than half was occupied by the cortex The cells were much diminished in number as shown by the thionin method

The Fornix This was much atrophied and the blood vessels within it were greatly thickened.

The aqueduct was almost occluded, this occlusion being probably a congenital malformation because the cavity was well lined throughout by a layer of ependymal cells, which would hardly be the case if the occlusion were caused by proliferation of the neuroglia The neuroglia tissue immediately adjoining the ependymal lining was a little proliferated, and the aqueduct was filled with red blood corpuscles which were unaltered in shape, and probably were deposited there shortly before death To the naked eye the aqueduct seemed to be entirely occluded In a microscopic section the aqueduct to the naked eye was hardly as large as the point of an ordinary pin

The second case is reported as one of intense congenital hydrocephalus without occlusion of the aqueduct The pathologic material was received from Dr Thompson S Westcott, to whom the case belongs The patient lived to be a year and a half old The skull was excessively large It is difficult to describe the gross appearance of the brain other than to say that it was a large thin bag of nerve tissue so attenuated in many places as to be translucent, and the mere handling of it caused numerous tears in its substance

Microscopic Examination—The corpus callosum was not more than 0 5 mm thick.

Left Occipital Lobe Sections in places were not more than 1 mm thick Here, as in the other case, the atrophy was much more pronounced in the white matter than in the cortex

Left Motor Area, Median Side The white matter was most affected. There was great diminution in the number of cells and the pericellular spaces were all distended The cells appeared all decidedly smaller than normal The pia was not thickened and the cortex and white matter were 4 mm thick

In contrast to the other case the fourth ventricle was greatly dilated as the result of the dilatation of the aqueduct of Sylvius The cause of the hydrocephalus in this case could not be determined, but the condition seemed to have been a congenital malformation

The two cases show very clearly that the distension of the fourth ventricle may depend on the patulency of the aqueduct of Sylvius

12 Le Progrès Méd July 14 1900 17
13 Bull et Mémoires de la Soc. Med. d Hôp de Paris, 1902, vii, 141
14 Jour of Nervous and Mental Dis 1900 559
15 Ztschr f. Heilkun., 1905 p 219

MYXEDEMA A STUDY *

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INTRODUCTION

HISTORICAL NOTE

In 1873, in a paper entitled "A Cretinoid State Supervening in Adult Life in Women," Sir William Gull[1] first described the disease known later as myxedema. This name was suggested by Ord,[2] in 1877, as he said, "To be applied to an essential condition in the cretinoid affection occasionally observed in middle-aged women" He also wrote

> The whole collection of symptoms are related as effects to jelly like swellings of the connective tissue, chiefly, if not entirely, consisting in an overgrowth of the mucous yielding cement by which the fibrils of the white element are held together Accordingly, I propose to give the name of "myxedema" to the affection

He further emphasized the similarity of myxedema and cretinism and among other things pointed out that in one of his cases (as in one of the cretins reported by Curling), there was diminution in size and almost complete annihilation of the thyroid gland Charcot[3] in 1880 proposed the name "cachexie pachydermique." He writes

> L'expression pachydermique nous paraît bien rendre compte des traits dominants du tableau clinique et qu'elle en donne une idée sinon plus exacte, tout au moins plus vivante que la dénomination des auteurs anglais

J L Reverdin[4] in a paper before the Medical Society of Geneva in 1882, called attention to a train of symptoms following the total extirpation of goitrous thyroid glands The symptoms which he enumerated were

* From the Medical Clinic of the Johns Hopkins Hospital, Baltimore

1 Trans Clinic. Soc. London 1874 vii.
2 Med Chir Trans. 1878 lxi
3 Le Progrès Médical 1880 viii
4. Rev Med. de la Suisse romande 1882, ii

weakness, languor, hebetude, pallor and edema of the face and hands, without albuminuria One case he states "was very analogous to a cretin" A year later (1883) the same author[5] pointed out the similarity of the group of symptoms to the myxedema of the English writers and named the condition "myxedema postopérative" He rightly attributed it to a loss of the thyroid gland At the twelfth congress of the German Surgical Association in 1883, Kocher[6] described a similar train of symptoms following total thyroidectomy to which he gave the name, "cachexia strumipriva" He, however, thought the condition was due to a mechanical injury to the structures of the neck, resulting in a chronic asphyxia Later Kocher acknowledged his mistake and accepted the view of Reverdin and Semon

Sir Felix Semon,[7] of London, next pointed out the correlation of myxedema and cachexia strumipriva and suggested a common causative factor, namely, a loss of function of the thyroid gland Paul Bruns, in 1884, reported the case of a boy, aged 10, in whom extirpation of the thyroid gland was followed by the condition known as sporadic cretinism

These observations led the Clinical Society of London to appoint on Dec 14, 1883, a special committee to investigate this subject The members of this committee immediately set about their researches and in 1888 published their monumental report[8] which has formed the groundwork for all later investigation of the subject The committee comprised such men as Victor Horsley, who directed the experimental work, William Ord, who collected the clinical data, and Halliburton who investigated the chemistry of the tissues In 1887, Virchow contributed some data to our knowledge of the pathology of the disease More recently many valuable contributions have been published, which will be discussed later

In America the first case of myxedema was reported in 1881 by W A Hammond[9] In 1888 Hun and Prudden[10] described in detail 4 cases of their own and reviewed the literature up to the date of publication

DEFINITION

In his monograph, Murray[11] defines myxedema as follows

It is an affection characterized by widespread changes in nutrition as shown by the appearance of solid edematous swelling of the subcutaneous tissues, dryness of the skin and arrest of development of its appendages, subnormal temperature, slowness in the mental processes and in the execution of voluntary movements

CLINICAL VARIETIES

Under the general term myxedema are included three groups of cases 1, cretinism, 2, myxedema proper, 3, operative myxedema

1 Cretinism —This is a chronic affection, either congenital or appearing at any time before puberty Osler[12] says

It is characterized by disturbance of the growth of the skeleton and soft parts, a remarkable retardation of development, an extraordinary disproportion between the different parts of the body, and a retention of the infantile state with a corresponding lack of mental progress

Three sub-varieties of cretinism are now recognized

a Endemic cretinism which develops in certain localities of Italy France and Switzerland, in association with goiter under local conditions of an obscure toxic nature No cases of this variety have occurred in America

b Sporadic cretinism in which the thyroid gland may be congenitally absent or atrophied after one of the specific fevers or in association with goiter In 1897 Osler[13] collected 60 cases of this type in America Many more cases have since been reported.

c Juvenile myxedema is a term suggested by Parker for a small group of cases occurring in children who have developed physically and mentally until their fourth or fifth year at least, at which time the symptoms occur in consequence of atrophy of the thyroid gland following in all probability an acute thyroiditis in the course of an infectious fever, as typhoid, scarlatina, etc In this group there are the usual symptoms of the adult form, but there is also an arrest of development at that stage of a child's growth when the disease set in Osler and others in America have reported a few instances of this variety

Pineless[14] in a very excellent paper has recently drawn sharp lines of demarcation between three types of cretinism, which are practically identical with the foregoing His varieties are a, Thyroaplasie or congenital myxedema, b, infantile myxedema, c, endemic cretinism The first type, though rare, includes some of the sporadic cases The second comprises those cases in which atrophy of the gland occurs in association with goiter or follows one of the specific fevers, the third is identical with endemic cretinism above described

A remarkably elaborate monograph on "Cretinism" by Wilhelm Scholz,[15] of Graz, has recently appeared, and is well worth a careful perusal His clinical material is particularly rich, and some of his conclusions are both interesting and original

2 *Myxedema Proper*—This includes those cases in which the symptoms develop in an adult at any age after puberty

3 *Operative Myxedema or Cachexia Strumipriva*—This is the variety in which the symptoms of myxedema develop after a total thyroidectomy for goiter or other disease of the thyroid gland Of this variety there are two different types, the cretinous and the adult myxedematous, according to the age of the patient at which the gland was removed

In the American literature prior to July 1, 1905, I find but two cases of operative myxedema The first, Dr McGraw's case, which is briefly referred to by Osler,[12] occurred in a young man in whom a complete thyroidectomy for goiter at the age of 12 was followed six years later by the gradual development of the typical myxedematous features which persisted for 12 years A second case was mentioned by Huntington[16] at a meeting of the California Academy of Medicine, Nov 27, 1900 This patient was also a male in whom myxedema followed one year after complete thyroidectomy More recently Moffit[17] states that two cases of postoperative myxedema have occurred in California, one of which was in all probability Huntington's case I have not included any of these cases in my series which is restricted to myxedema proper

Abortive forms occur in myxedema just as in exophthalmic goiter The French have suggested the term

5 Ibid 1883 iii
6 Verh d Deutsch Gesellsch f. Chir., 1883 ii.
7 Brit. Med. Jour 1883 ii
8 Clinic. Soc. Trans (London) 1888 supplement vol xxi
9 Neurological Contribution (New York) 1881 i.
10 Am Jour Med Sci 1888 xcvi
11 Twentieth Cent Practice 1895 iv
12 Am Jour Med Sci 1893 cvi
13 Trans Cong A M Physicians and Surgeons 1897 i.
14 Wien klin Wochschr 1902, xv
15 Klin und anatom Untersuch über Cretinismus Berlin, 1906.
16 The Journal A M A 1901 xxxvi
17 Ibid. 1905 xlv

"myxedeme fuste" J. L. Reverdin[18] in 1886 first noted this form in cases following partial thyroidectomy in which there was subsequent atrophy of the remainder of the gland. In these cases there may be no mucinoid infiltration of the skin but there is a liability to swelling and localized hypertrophy of the mucous membranes of the nose, throat, etc., as well as a predisposition to tonsillar enlargement and adenoid formation. Further, the teeth may decay early and the hair fall out prematurely. The French consider loss of the outer half of the eyebrow as almost pathognomonic of this type of the disease. In women there is also a tendency to circulatory disturbances of the mucous membranes at the menstrual period or a hyper-sensitiveness of the nose, throat or even of the vaginal mucous membrane. Chronic constipation, painful joints, vague pains between the shoulders, paresthesiæ and an occasional giving way of the legs, are other obscure manifestations of the disease. Moffitt[17] has reported 11 cases of this type, in all of which definite improvement followed thyroid medication.

CASE REPORTS

The following 10 cases occurred in the practice of Dr. William Osler, either in private or in the wards of the Johns Hopkins Hospital.

CASE 1.—*White female, aged 37, quintipara, sister of patient in Case 2, a second sister with exophthalmic goiter, a third sister with Raynaud's disease, three years' duration, thyroid therapy, loss of 54 pounds, recovery. (Previously reported by A. R. Oppenheimer.)*

Patient.—M. D., American, housewife, of Virginia, was admitted Jan. 26, 1894, to the Johns Hopkins Hospital complaining of "swelling of the body."

History.—The parents were not blood relatives, of two brothers one had "renal trouble." There were three sisters, one of whom is the patient in Case 2 of this series, another had exophthalmic goiter and died from "peritonitis," and a third later consulted Dr. Thayer (October, 1905) for Raynaud's disease. Patient had always been healthy and had borne five children.

Present Illness.—This dated back three years (1891), when at the age of 34, while pregnant, she underwent a prolonged physical and mental strain. Subsequently she gave birth to a child, which lived only three months. About three months after delivery and about ten days before her menstrual period, she first noticed that her entire body became more or less swollen, but did not pit on pressure. This swelling was repeated before subsequent "periods," but would disappear temporarily with the onset of the flow. A year before admission (1893) the menses became less frequent, being at intervals of from six to eight weeks. The swelling also became more or less constant, though it was more pronounced at certain times. The tongue began to feel stiff and swollen. Later the skin became dry, harsh and rough, there was some loss of hair and a constant chilly sensation. The bowels were constipated. The appetite was good. Micturition was free, but never excessive. There was no loss of memory or difficulty of speech.

Physical Examination.—On Feb. 26, 1894, examination revealed a very large woman of medium height, weighing 189 pounds. She was very garrulous. The face was heavy, rather dull and expressionless. The cheeks and neck were very full and with an almost edematous appearance. The complexion was doughy, without any marked hectic flush. The supraclavicular regions were moderately full. The arms and legs were decidedly swollen. The dorsal surfaces of the hands and feet were very puffy and edematous looking, but nowhere pitted on pressure. The skin had a resistant feel, very dry and in some places showed a little scaling. The hair was rather dry and coarse. The finger nails were thin, with marked longitudinal striations, and a slightly everted and very irregular free edge. The thyroid gland could not be felt, though, owing to the thickness of the neck, it was impossible to determine any diminution in its size.

The abdominal and thoracic viscera were normal. The pulse ranged between 60 and 68 to the minute. The temperature in the mouth ranged between 97.6 and 98.4 degrees. The urine had a specific gravity of 1020, and on two examinations contained neither albumin nor casts.

Clinical History.—Jan. 27, 1894. Five grains of desiccated sheep thyroid were given three times a day.

January 31. In the evening there was a very striking fulness over both clavicles, and a mass the size of a hen's egg was present in each fossa. These disappeared by next morning.

February 2. For the first time she complained of weakness, headache and pain in the back. The pulse had become more rapid, ranging from 80 to 90 to the minute. There was sweating and some nausea. She had taken but 65 grains in the five days, and had lost 8 pounds. The dose was reduced to 5 grains twice a day.

February 9. She had then taken 160 grains of thyroid. The temperature and pulse range since February 2 was 98.4 to 99.5 degrees and 84 to 108, respectively. There was a loss of 10½ pounds during twelve days' treatment.

She was discharged from the hospital much improved, with directions to continue the treatment at home.

Further History.—A letter from her physician, Dr. H. B. Melvin, stated that her improvement continued. During the first twenty-five days of treatment she had lost 25 pounds, and the loss continued until she then was very nearly her normal weight.

November, 1894. She was then taking only 3 grains every second day, and though eight months' pregnant, was very well.

Sept. 30, 1896. The patient was readmitted to the hospital for observation. "Her condition beyond being nervous was very good." The skin was soft and natural and there was no edema.

October 1. Her weight was 135 pounds, i. e., a loss of 54 pounds since admission in 1894.

October 9. After a few days' rest in the hospital she was discharged.

Oct. 21, 1905. The patient consulted Dr. Thayer, who kindly gave me the following notes: "She has regarded herself as well since leaving the hospital. She has, however, taken the thyroid intermittently. Her ordinary course has been to take 5 grains of Armour's extract in capsules three times a day for four or five days, then to stop taking anything for two or three weeks at the end of which time she begins 'to feel slow and tired and to swell.' This swelling consists of a puffiness of her hands and shoulders. The ankles are continually puffy. Her pulse is always slow and she is always rather susceptible to cold, a susceptibility which is much more marked after she has stopped taking the thyroid for a considerable length of time."

On examination, "she looked well and bright. The face, however, was a little heavy and above the clavicles there was rather a marked fulness. The hands were chubby, but nothing more. About both ankles there was a marked elastic puffiness. Between the sternomastoids in the region of the thyroid there was a distinct hollow, the thyroid was not to be felt. The pulse was 68."

CASE 2.—*White, female, aged 19, nullipara, sister of patient in Case 1, exophthalmic goiter (previously reported by A. R. Oppenheimer), readmitted at 22 with myxedema, no trace of goiter, thyroid therapy, recovery.*

Patient.—S. E., American of Virginia, was admitted Jan. 26, 1894, to the Johns Hopkins Hospital, complaining of "enlargement of thyroid gland" and "great nervousness."

History.—Her family history was the same as that of her sister the patient in Case 1. Patient had measles and scarlatina in childhood. Menses had always been irregular, appearing only once in the previous year. Patient was single and had borne no children.

Present Illness.—This began in 1891, three years before admission, when after a severe fright she became very nervous, excitable and restless. There were frequent palpitations of the heart. The thyroid gland became enlarged in 1893 and re-

18. Congrès franc. de Chir. 1886, ii.

mained so There were attacks of dyspnea due, the patient thought, to pressure on the trachea by the goiter There was also tremor of the hands following any excitement. The voice became husky, the eyes became a little more prominent. The appetite was good, there was no nausea and no vomiting Bowels were regular, there was no cough

Physical Examination—Examination on Sept 26, 1894, revealed a slight though well nourished girl, of very neurotic temperament The face was flushed and there were numerous areas of transient flushing of the skin over the body There was a decided double exophthalmos, but von Graefe's sign was absent There was marked symmetrical enlargement of the thyroid gland The apex beat of the heart was in the sixth interspace, the impulse was powerful and heaving, first sound markedly booming The lungs and abdominal viscera were negative The urinalysis showed a specific gravity of 1012, with a slight trace of albumin, but no casts The pulse was rapid from 110 to 120 to the minute Temperature was 99 to 99 5 degrees Weight was 137 pounds

Clinical History—January 27 A diagnosis of exophthalmic goiter was made and the patient was given thyroid extract gr v, t i d

February 2 A very definite fine tremor of the hands was noted

February 9 She was discharged after having taken 200 grains of thyroid extract and having lost 2½ pounds (134½ pounds)

Subsequent History—November 22 After her discharge from the hospital she was given tincture belladonnæ, gr xv, t i d, for two months, which resulted in some diminution in the size of the goiter and in the degree of exophthalmos

May 7, 1897 Patient was readmitted She was then aged 22 and single She complained of "general swelling" and "soreness"

After leaving the hospital in 1894 she had not felt very strong and was unable to take any active exercise In January, 1896, her friends noticed that she was becoming stout, and the patient found that her collar was getting tight and that her shoes would not button The swelling was general, including the supraclavicular regions It was more pronounced after exercise and in the afternoon She felt very drowsy and "not up to anything" Her speech became slow Occasionally the skin of the hands and face around the mouth would turn purple She suffered from the cold, especially in the evenings, and she became very nervous Bowels were regular There was no increase in the amount of urine She was given thyroid extract three times a day by her physician, and at first improved, but later became so weak that she was unable to sit up and the dose was reduced

Second Physical Examination—Examination on May 7, 1897, revealed a paler and little fuller facies than on previous admission There was no puffiness above the clavicles The goiter had entirely disappeared The tongue was rather large, drvish and indented The hands were a little full. The feet and legs above the ankle joints were swollen, but did not pit The skin was harsh Over the face was a marked vasomotor disturbance There was marked dermatographia Superficial reflexes were active Except for a palpable right kidney the examination was negative

Urine had a specific gravity of 1010, and contained neither albumin nor casts The amount in twenty four hours was 340 to 800 c c Temperature was from 99 4 to 98 2 degrees, pulse, 60 to 98 weight, 122 pounds (i e, 12½ pounds less than on discharge, February 1894)

Further Clinical History—May 12, 1897 She was given thyroid extract, gr ii, t i d, which, on May 23, was increased to gr iv

May 31 Dr Osler noted that "the joints of the feet were painful, but not swollen or infiltrated There was some puffiness of the wrist and face. The legs were much smaller and more natural There was slight tremor There was no enlargement of the thyroid gland, but the lobes could be felt There was instability of the vasomotors of the skin, and a patchy chloasma over forehead, chin and neck." Patient was discharged 'much improved," having taken 186 grains of thyroid extract and having lost 4 pounds in weight (118 pounds)

Her temperature after beginning treatment was practically unaffected, being still always above normal, but the pulse ranged a little higher (70 to 112) The quantity of urine also showed some increase sometimes reaching to 800 and once to 950 c.c. in the twenty four hours

Oct 21, 1905 Dr Thayer learned from the sister (Case 1) that the patient "has grown rather worse From time to time she has had definite mental symptoms, being 'flighty' She feels that she is sick and that her presence in the house makes others sick and she tries at times to get away" At other times she is perfectly well except for "nervousness" There was no statement as to the use of the thyroid tablets

CASE 3—*White, female, aged 23 nullipara, consanguinity of grandparents and parents, duration four months, marked delusions and hallucinations thyroid therapy, loss of 37½ pounds in two weeks, recovery*

Patient—E T, German, tobacco factory girl of Baltimore, was admitted to the Johns Hopkins Hospital June 26, 1894

History—Her paternal grandparents were first cousins Her father and mother were healthy, but were second cousins There was a history of tuberculosis in mother's family There was no history of goiter, myxedema or neurosis in the family Patient was born in Germany, in the district of Westphalia, but came to America at 16 She did not remember having seen any cases of goiter, etc, in her native village Except for the diseases of childhood she had always been well and strong The menses began at her fifteenth year and were regular until after her arrival in America when she had amenorrhea for three months They returned and were regular until May, 1891 She came to the Johns Hopkins Hospital Dispensary on June 6, 1891, complaining of pallor constipation, fulness after eating and loss of weight Physical examination was practically negative except for slight chlorosis

She occasionally attended the dispensary during the following year The general condition improved markedly, though the catamenia did not return Between April 9, 1892, and June 25, 1894, the patient was lost sight of When last seen she was a rather delicately formed well nourished girl with good color and delicate attractive features On June 26, 1894, she applied to the hospital for treatment and was admitted The following additional facts were obtained On July 15, 1893, she went to the country as chambermaid While there her general condition improved greatly The catamenia reappeared for the first time since 1891 and became regular, lasting three days without pain She returned from the country Oct 1, 1893, and went to work in a tobacco factory

Present Illness—In February or March, 1894, her health began to fail In April 1894, her family began to notice that her eyes appeared swollen She herself observed loss of appetite, dryness of the throat and also a general dryness of the skin, with absence of sweating The swelling increased and appeared also in the hands and arms Her friends noticed that her voice became changed, being deeper and harsher, while she spoke in a distinctly slower more expressionless manner There was an unnatural thirst She became very susceptible to cold and wore heavier clothes than formerly She was very irritable and nervous and her ordinarily placid disposition entirely changed Her sleep however, was always good. In fact there was a certain tendency to drowsiness and she was easily fatigued The bowels were constipated There was no cough but she complained of a heavy feeling in her chest Several weeks before entry she began to have delusions She fancied that certain members of her family were going to poison her She also believed that she was pregnant and insisted that she felt something moving in her abdomen She declined to stay at home and went to the house of a companion who brought her to the hospital She had gained slightly in weight.

Physical Examination—Examination by Dr Thayer June 26 1894 revealed a most extraordinary change in her general appearance There was marked puffy edematous condition of the face, hands and arms, which did not however pit on pressure She had a peculiar muddy complexion The puffiness was particularly marked about the eyes the bridge of the nose and chin There was a fulness over the clavicles but no marked edema The hands and arms showed the same puffy appearance, without any pitting She had an [illegible]

dull manner, talked slowly, appeared suspicious and was distinctly irritable She was reticent about stating her delusions and was unwilling at first to allow a physical examination The urine was free from albumin The thyroid gland could not be distinctly felt A diagnosis of myxedema was made, and she was admitted to the hospital for observation During the first four days there was little change

Clinical History—June 30, 1894 Dr Thayer noted that the skin, particularly that of face and hands, was rather dry, harsh and resistant The lips seemed thick The general expression was dull and heavy, very similar to that in acute nephritis The cheeks were pink in rather sharp contradistinction to the white areas elsewhere The hair was dry, but the nails were well formed The pulse was slow, 50 to the minute, regular and full The thyroid gland appeared extremely small, being scarcely distinguishable on palpation The heart, lungs and abdominal viscera seemed normal The deep reflexes were not increased There was no edema of the legs She was placed on desiccated thyroid, gr iii t i d

July 1, 2 and 3 The urine showed no albumin and no casts and a normal specific gravity (1020 to 1022)

July 4 There was a trace of albumin, but no casts

July 5 Blood examination revealed Hb = 59 per cent, red blood corpuscles, 3 532,000, white blood corpuscles, 6,000 A differential count of 500 leucocytes gave

	Per cent
Polymorphonuclear neutrophiles	77 4
Small mononuclears	17 1
Large mononuclears	4 2
Eosinophiles	1 3

There was no poikilocytosis

July 9 The condition had changed materially since beginning the thyroid treatment 9 days before The puffiness about the face had diminished, but scarcely as much as that about the hands and arms which had disappeared in a most remarkable manner The mental condition had entirely cleared up and she was then bright and cheerful Pulse was 104

July 14 A further change in her condition was noted While the face was still a little full, the edematous appearance about the eyes was almost entirely gone The change in the hands and arms was almost more remarkable. The skin was no longer dry, but moist and warm, and she stated that there was a good deal of sweating, She was placid and cheerful The blood count revealed Hb 69 per cent., red blood corpuscles, 6,124,000, white blood corpuscles, 8,500

She was discharged on the fourteenth day much improved, having taken 270 grains of thyroid extract and having lost 3½ pounds

The temperature, which was usually normal or slightly above, showed later a tendency to be subnormal The pulse which formerly ranged between 72 and 86 became more rapid with the thyroid treatment and varied from 80 to 105 She was directed to continue the thyroid extract, but to increase the dose to gr vii t.i d

Subsequent History—July 28, 1894 She returned to report herself as feeling perfectly well The change in her physical condition was most extraordinary All signs of puffiness were gone, her color was natural, her voice and manner as they used to be

Sept 4, 1894 She again reported, she had gained materially in weight, and looked stronger and better There was no sign of puffiness in the face or hands She was then taking the glycerin extract, instead of the desiccated powder, every other day

Dec 14, 1894 She was not feeling as well, as she had been more irregular in the use of the thyroid extract The face was a little swollen and the skin dry There was a tenseness about the skin of both hands and feet, but no swelling of the legs

At intervals during the subsequent ten years Dr Thayer saw the patient who remained free from symptoms as soon as she recognized the absolute necessity of taking small doses of the thyroid gland

Oct 20, 1905 The patient reported again at Dr Thayer's request She stated that she still took a 5 grain tablet every day If she omitted it for more than forty-eight hours she felt the bad effects The general health was excellent Menstruation was regular On examination she looked well There was still a little roundness about the face and a peculiar expression about the eyes due to a little fullness of the lids, but so slight as to be overlooked by the casual observer Her skin felt natural There was, however, a striking depression over the thyroid cartilage and no trace of the gland could be felt

(To be continued)

PATHOLOGY OF PARALYSIS AGITANS *

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The subject of the pathology of paralysis agitans is one on which few physicians have definite ideas, and those who have differ widely from each other It is obvious that so long as the nature of this disease is in controversy and obscurity the treatment must be imperfect, changeable and unfortunately inefficient Numerous investigations with the idea of clearing up this problem have but added to its complexity by suggesting new hypotheses and unexplored fields for reasearch

The clinical picture of paralysis agitans is so clear cut and typical, the course of the disease so unchangeable and progressive that it certainly suggests an organic basis To classify it as a neurosis is begging the question and explains nothing, while it would be distinctly harmful if it hindered further search for the real pathology

SUMMARY OF LITERATURE

In order to define the present status of our knowledge of the subject, it will be necessary to review briefly the findings and opinions recorded by numerous observers since Parkinson wrote his classical paper in 1817 For the sake of convenience these findings may be classified according to their location into 1 Those in the nervous system, the brain, spinal cord and peripheral nerves 2 Those in the muscles 3 Those in the ductless glands

The gross lesions in the central nervous system found by some of the earlier writers which were regarded by them as the cause of paralysis agitans are not now credited with such a relationship It must be remembered that at that time the difference between multiple sclerosis and paralysis agitans was not well understood, consequently, in the opinion of Wollenberg,[1] one of the cases which Parkinson himself described was probably a case of multiple sclerosis and, according to the same authority, similar cases have been reported by Oppholzer,[2] Marshall-Hall,[3] Skoda,[4] Lebert[5] and others

Confusion has arisen, also, from the fact that cases are reported in which paralysis agitans was combined

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Fifty seventh Annual Session June 1906 This paper was accompanied with a detailed report of fourteen cases for which THE JOURNAL could not give space The author offers to send a reprint of the complete article including the case reports, to anyone who requests it and sends a two-cent stamp for postage The entire article will also appear in the volume of Transactions of the Section on Nervous and Mental Diseases of the American Medical Association 1906 and in the volume of Contributions of the Laboratory of Neuropathology of the University of Pennsylvania, 1907

1 Nothnagel spec. Path. u Therap xii
2. Wien med. Wochschr, 1861, Nos. 36-38 Quoted by Wollenberg reference 1
3 "Traité des Maladies du Systeme Nerveux, 1841
4 Wien med Halle 1862 No 13
5 *Handb d. prakt. Med.*, 1871, II, p 632.

with multiple sclerosis as in the case reported by Furstner[6] (his second case) and the case of Schultz,[7] in which the diagnosis is questionable, as he only found areas of sclerosis of pinhead size ("Stecknadelkopfgrosse"), but Sanders[8] thinks it should be included in this category Many of the earlier writers recorded as paralysis agitans cases in which the tremor was symptomatic of some gross lesion of the brain, such as the case reported by v Leyden[9] of a sarcoma of the left optic thalamus, also those of Charcot,[1] Benedikt,[1] and Blocq and Marinesco,[10] who described cases of tremor caused by tumors situated in the region of the cerebral peduncles Chvostek[11] reported a case in which clinically there was first paresis, then tremor of the extremities on the left side, and in which anatomically there was a sclerosis of the entire right cornu ammonis Ordenstein[12] found in one case areas of softening in the cerebral peduncles, but in the two other cases reported by him at the same time the findings were negative Herterich[13] described a case with very marked contractures in which he found an area of softening in the left cerebral peduncle Cases have been reported by Virchow,[14] Leubuscher,[8] Berger[7] and others in which areas of softening in the brain were the cause of a tremor In reporting a case of tumor of the left prefrontal lobe, Mills and Weisenburg[15] say

> There were muscular tremors in the hands and legs much like those seen in paralysis agitans At first they were on the left side only, but toward the end involved the right side also They were at first partially under control, and by an effort of will the patient could stop them, later he could not, and they occurred also during sleep

Though this tremor differed in some respects from the tremor of paralysis agitans, it is difficult to see why, if a symptomatic tremor, it should have begun on the same side as the tumor There are many instances of gross lesions found in the brain which are simply conditions complicating the paralysis agitans, viz Oppolzer[16] found an apoplectic cyst in the occipital lobe accompanied by an ependymitis of the lateral ventricles, especially the posterior horns, v Sass[17] reported a case in which there was an ependymitis of the fourth ventricle At present the occurrence of gross lesions in the central nervous system in cases of paralysis agitans is regarded as merely a coincidence

A critical study of the positive pathologic findings in the central nervous system in cases of paralysis agitans reported by numerous investigators leads to the conclusion that they are simply the changes of senility modified occasionally by intercurrent affections or the senile marasmus that is so often the cause of death in these cases The lesion regarded as specific for the disease by one observer is expressly denied by many others In most of the cases the lesions described are diffuse and affect various anatomic elements, nerve fibers, nerve cells, neuroglia, the blood vessels, etc, but there is the greatest diversity of opinion as to which is the most affected, and it is evident that these findings have no constant relation to the disease Occlusion of the central canal by the overgrowth of the epithelial cells is described by Joffroy,[18] Demange[19] and many others In the case reported by Murchison and Cayley[20] the central canal was widened and filled with leucocytes In many cases numerous amyloid bodies were found in the spinal cord Cases are reported as presenting a partial degeneration of the tracts in the white matter of the spinal cord Burzio[21] found a light grade of atrophy in many fibers of the crossed pyramidal tracts and of Goll's and Burdach's columns Dowse[22] found degeneration of only one lateral column Sanders[8] found "a somewhat diffuse degeneration of nerve fibers in the spinal cord, but especially in the direct and crossed pyramidal tracts" Most investigators expressly deny the existence of any degeneration in the spinal cord, and in the 14 cases studied by me I was unable to detect any degeneration in the Marchi methods of staining

Many writers have described changes in the neuroglia in paralysis agitans Schultze speaks of a chronic "leptomeningitis and chronic interstitial myelitis" Murchison and Cayley found thickening of the subpial neuroglia layer with extension of the proliferation into the cord and islets of sclerosis scattered throughout the spinal cord by either the Weigert hematoxylin or the cord, especially in the dorsolumbar region and more in the posterior root entrance zone Demange,[19] Joffroy[18] and Dubief[23] report similar findings Koller[10] found practically the same in his case, but questions whether we *can draw a line between this proliferation and the neuroglia* increase in senility In paralysis agitans the neuroglia overgrowth, he thinks, was more marked in the lateral and posterior columns, and he considers it to be the primary change, which by interfering with the lymph circulation causes secondary alteration of the nervous elements Redlich[24] lays great stress on the increase of glia tissue which he found, especially about the blood vessels, forming small islets which had a tendency to become confluent and form larger islets This perivascular sclerosis occurred chiefly in the anterolateral columns, and the stiffness of the muscles and the tremor, in his opinion, are due to a functional disability ("schwäche") of the nerve fibers Somewhat similar findings are described by Wollenberg,[1] Borgherini[25] and Sanders,[8] but the last two mentioned found the neuroglia proliferation more marked in the gray matter than in the white Sanders especially emphasizes this as being a different condition than that found in senility He found not only a comparatively greater increase in the amount of neuroglia tissue in the anterior horns but also numerous spindle cells ("spinnenzellen") in both cases of paralysis agitans and cases of senility with a marked tremor He explains the tremor and also the difficulties in gait by assuming that this glia overgrowth interferes with the connection between the upper and lower motor neuron As contrasted with these findings, Dana[26] describes a very moderate increase in the connective tissue within the cord and none of the islets of neuroglia described by Redlich[24]

6 Arch f Psych u. Nervenkrankh 1898 xxx.
7 Virchow s Arch lxviii 1876 p 120
8 Article by Sanders Monatschr f Psych u Neurol 1898
9 Virchow s Arch xxix, p 202, 1864
10 Ref in Neurol Centrbl 1894
11 Wien med Wochschr 1871 Nos. 37 to 39
12 Thèse de Paris 1868
13 Herterich Dissert Würzburg 1878 Quoted by Keller reference 16
14 Virchow Die krankhaften Geschwülste xi Cited by Sanders reference 8
15 THE JOURNAL A M A 1906 No 5
16 Article by Keller Virchow s Arch cxxv p 287
17 Petersburg Wochschr 1891 Nos. 19 20 abs in the Neurol Centrabl, x, p 756
18 Gaz de Hop 1871 p 602
19 Rev Med de l Est 1897
20 Trans Path Soc Lond 1871
21 Riv spermin di frenatria 1903 No 4 1904 No 1 abs in Centrabl f allg Path u path Anat. xvi p 700
22 Trans. Path. Soc Lond., 1879 xvi
23 Thèse de Paris 1887
24 Jahrb f Psych xii p 287
25 Article by Borgherini Wien
26 Am Jour Med Sci., Novemb

Pathologic changes in the blood vessels of the central nervous system are described by many writers on the subject They are generally of the arteriosclerotic type, but in some cases are described as peculiar either in character or distribution Burzio[21] found the blood vessel walls thickened, especially in the neighborhood of the neuroglia overgrowth, and Sanders emphasizes this relation Sanders found also that the finer capillaries were more affected than the larger, a fact which has been noted by Joffroy,[18] v Sass[17] and by Murchison and Cayley[20] The last named and also Ketscher[27] found miliary hemorrhages here and there in the spinal cord J R Hunt[28] found that the blood vessels in the spinal cord were increased in number and there was a universal cellular infiltration about them which, when stained by Erlich's method, proved to consist of escaped leucocytes Miliary aneurisms were seen in the spinal cord by Borgherini,[25] Ketscher[27] and Sanders[8] Carrayou[29] found varicosities of the veins in the medulla with small areas of softening in the oculomotor root and pyramidal tracts, and he explains the clinical symptoms of the disease on the ground that these lesions interfere with the passage of the nervous impulses Redlich[24] speaks of a hyaline degeneration of the blood vessel wall with an especial thickening of the media and a proliferation of tissue about the blood vessel which fills up the perivascular spaces These changes, he affirms, were much less marked in the medulla oblongata and were not there accompanied by the perivascular sclerosis Dana[26] could discover no special thickening of the walls of either the veins or arteries in his case Borgherini[25] found changes in the sympathetic ganglia, degeneration of the cells with an overgrowth of the interstitial tissue

Philip[30] found degenerated Betz cells in the paracentral lobules The change consisted in a diffuse staining of the cells and a similar though less marked condition was noted in the motor cells of the anterior horns of the spinal cord His finding is the only direct pathologic evidence I could discover bearing out the oft repeated assertion (Gowers,[31] Bychowski[32] and others) that paralysis agitans is a disease of the cerebral cortex Gordinier[33] found changes in the motor cells of the cerebral cortex, but not so marked there as in the spinal cord The Golgi stain showed the dendritic processes nearly normal

The condition of the anterior horn cells of the spinal cord has been noted as normal in some of the cases to which reference has already been made (Redlich,[24] Wollenberg[1] and others) In a large number of cases the anterior horn cells were found to contain an excessive amount of yellow pigment (Dubief,[23] Dowse[22] v Sass,[17] Hunt,[28] Borgherini,[25] Herterich,[13] Joffroy,[16] Ketscher,[27] Gordinier,[33] Luys[34] (of the medulla oblongata), Sanders[8] and others) Joffroy[35] and Demange[10] describe also a pigmented condition in the cells of the column of Clarke Gordinier[33] also noted this but found it less marked than in the anterior horn cells Distinct degenerative changes in the anterior horn cells are described by Demange,[10] Koller,[16] F Burzio,[21] Caterina,[36] Hunt,[28] Gordinier[33] and Dana[26] The changes described as present in these cases differed somewhat, but were generally a chromatolysis, with a loss or displacement of the nucleus of the cell, atrophy of the cell, vacuolation of the cell, tumification of the nucleolus, etc Dana[26] lays great stress on diminution in number and pathologic changes in the dendritic processes of the spinal motor cells, with a consequent diminution in richness of the dendritic plexus in the anterior horns He found this lesion most marked in the lower cervical and first dorsal segments (corresponding to the beginning of the tremor in his case), next in the midcervical, then midlumbar, upper sacral and least in the middle and upper dorsal The brain cortex showed slight degeneration of the cells It should be remembered that Dana's case was complicated by sarcomatosis, and death was due apparently to exhaustion, and that in such cases a tumor toxin is probably present which produces chromatolytic and degenerative changes in the nerve cells

No pathologic changes in the cerebellum were noted by Dowse,[22] v Sass,[17] Borgherini,[25] Redlich,[24] Hunt,[28] Gordinier[33] or Dana,[26] except participation to a moderate extent in a general arteriosclerosis Hunt[28] and Gordinier[33] found the spinal nerve roots normal Dana[26] found them greatly congested, and by Borgherini[25] and Redlich[24] they were found slightly degenerated

A long list could be made of cases in which the pathologic examination of the central nervous system was negative Thus Koller[16] cites the cases of Petraus,[37] Olliver,[16] Cohn,[38] Charcot,[39] 3 cases, Westphal,[40] Simon,[16] 4 cases, Bauer,[41] 2 cases, Leroux[42] and Weinkowitz[43] To these may be added the case of Oppenheim,[8] in which he found only a "questionable" staining of the columns of Goll Furstner[9] mentions specifically that there was no pathologic condition present in the brain or spinal cord of his first case, the blood vessel walls were not thickened and there was no increase of the neuroglia nor changes in the nerve cells His patient was 61 years of age and had the disease for five years Schwenn[44] reported a case of a patient who died at the age of 43½ years and was therefore no senile He says "I found neither in the brain nor spinal cord any pathologic changes" Idelsohn[45] and Blocq[46] also report cases in which there was no pathologic change in the central nervous system

Various changes have been observed in the peripheral nerves Borgherini[25] found in the vagus, median and external tibial nerves a hyperplasia of the interstitial tissue and increased vascularity Skoda[4] found thickening of the neurolemma in the nerves of the upper extremities Joffroy reported a case in which paralysis agitans was combined with a peripheral neuritis, and Follet and Marquis[47] report *Un cas de maladie de Parkinson fruste, peut-être d'origine polynéuritique* Their paper is inaccessible to me Borgherini,[25] Redlich,[24] v Leyden[7] and Ketscher[27] have noted an increased amount of the interstitial tissue in the nerves, and by the last-named the nerves were also found degenerated Blocq,[46] who examined the peripheral nerves, both in the fresh state and after hardening, found nothing abnormal Dana[26] also

27 Prager Ztschr f Heilk December 1892.
28 Jour Nerv and Ment. Dis. 1896
29 These de Paris 1903 Abs in Le Semaine Med. 1903 No 16
30 Deutsch Ztschr f Nervenhlk 1899 Nos 5-6
31 Allbutt's System of Medicine, ix p 73 1900
32 Arch f Psych u Nervenkrankhl, 1898 p 722
33 Am. Jour Med Sci 1899 p 648
34 Gaz. Med. de Paris 1880
35 Arch. de Physiol 1872, No 1
36 Riv di path. nerve ment. 1899

37 Den Fremadskridende Skjoelvelamhed, Hosp tid. Kjobenh, 1861 cited by Koller reference 16
38 Wien med Wochschr 1860 p 406.
39 Leçons sur le Systeme Nerv Paris 1884
40 Charite-Annalen 1876 p 360
41 Annalen d stadt allg Krankenh. in Munchen 1 p. 124
42. Diss Paris 1880
43 Diss. Breslau 1883
44 Deutsch Arch f. klin Med. 1901 p 193
45 Ley Neurolog 1904 p 394
46 Manuel de Med. Debove Archard 1894 Quoted by Raymond, reference 57
47 Bull Soc. Sci. et Med de l Ouest., xi 104

found them normal v Sass[17] found the perineurium and endoneurium thickened, and they appeared partially degenerated when stained by the method of Pal

ORIGINAL INVESTIGATIONS THE NERVOUS SYSTEM

I have had the opportunity of examining the pathologic material from 14 cases of paralysis agitans, in 8 of which I was able to study the peripheral nerves and muscles and in 2 of them also the ductless glands That 14 cases with necropsy is a very large number will be better appreciated when it is remembered that Gordinier,[33] writing in 1899, could find reported but 54 cases with necropsy in the whole literature of the disease, and of these only 24 had been examined histologically The largest number of cases with necropsy reported by any single observer is 4 Details of the positive pathologic findings in 14 cases with necropsy, in 12 of which there is also given an abstract of the clinical histories, will be found in the appendix

The ages of the patients at death, in the cases that I have examined ranged from 45 to 75 years, the duration of the disease from two to twenty years

Macroscopic examination of the central nervous system, including trans-sections, revealed lesions in only one case

The tissues are preserved in formaldehyd solution (10 per cent), or in Müller's fluid In making the microscopic examination of the central nervous system pieces of tissue were taken from each paracentral lobule, the pons, the vermis of the cerebellum, the medulla oblongata and from the cervical, thoracic and lumbar regions of the spinal cord The anterior and posterior spinal nerve roots from the lumbar and cervical regions were examined separately from the cord in 6 cases, the posterior root ganglia, from the lumbar region, in 2 cases, the peripheral nerves were examined in 8 cases The pieces were dehydrated in alcohol in the usual manner, imbedded in celloidin, and the sections stained as follows Thionin modification of the Nissl method for study of the nerve cells the Weigert hematoxylin and the Marchi osmic acid for degeneration, the hemalum-acid fuchsin, and the Mallory neuroglia stains

A summary of the findings in my cases shows that the most constant lesion was a fibrosis of the capillary blood vessels of the spinal cord, which by rendering them more prominent, caused an apparent increase in their number The region of the posterior and lateral columns seemed to be the most affected This lesion was present in eleven cases, in all of which it was an accompaniment of a general sclerosis of the blood vessels of the nervous system The next most frequent finding was a diffuse overgrowth of the glia in the spinal cord usually more marked in the posterior columns, in six cases It was not confined to any system of fibers and in but one case did it show the tendency to form islets about the blood vessels as described by Redlich[24] In no case was it demonstrated that the neuroglia proliferation was more marked in the gray matter than in the white matter The Betz cells of the paracentral lobules were considerably pigmented in many cases but only in four cases was the pigmentation very marked, and in only two cases were there any distinctly degenerated cells The motor cells of the anterior horns of the spinal cord were excessively pigmented in six cases, in four cases they showed distinct chromatolytic changes in some of the cells but the loss of the dendritic processes with a consequent lessening of the richness of the dentritic plexus, as described by Dana, was not observed Recent hemorrhages into the anterior horns of the spinal cord were observed in two cases, they were probably agonal The perivascular spaces were widened in four cases, and in five cases numerous amyloid bodies were seen in the spinal cord, especially in the posterior columns The central canal was closed in eight cases, dilated in one case, double in one case, but probably these are to be regarded as normal conditions The cerebellum pons and medulla oblongata were practically normal in all the cases in which they were examined, a moderate sclerosis of the blood vessels and a slight subpial proliferation of the neuroglia not being considered pathologic when found in aged persons In one case there was a round cell infiltration of the pia The anterior and posterior spinal nerve roots in the cervical and lumbar regions were found congested in two cases, but not in any case degenerated There was no degeneration of the nerve fibers of the cord in any case, but the neuroglia proliferation, in six cases, gave the posterior columns the appearance of staining lighter than the rest of the cord by the Weigert hematoxylin stain The peripheral nerves were examined in eight cases, in two they appeared degenerated when stained by the Weigert hematoxylin stain, in two others there was a swelling of the myelin sheaths, accompanied in one case with swelling of the axis cylinders The intramuscular nerves, even those within the muscle spindles, stained well with the Weigert hematoxylin stain The nerves showed no degeneration when stained by the Marchi method

DISCUSSION OF THEORIES OF THE NERVOUS ORIGIN OF THE DISEASE

Many theories have been advanced as to the nature and location of a lesion in the central nervous system in paralysis agitans Some have been purely hypothetical and based entirely on the clinical symptoms, others on the findings in the few cases examined by their authors Gowers[31] expresses his view thus

> Paralysis agitans must be regarded as a chronic senile change in the nutrition of the terminations of the branching processes of the dendrites of the motor nerve cells of the cortex causing constant liberation of nerve energy to be increased and also causing a change in the form, uniformity gives place to *rhythmical liberation*

Bychowski[32] and others hold similar views The arguments advanced in support of this are 1 A hemiplegic distribution of the tremor speaks for a cortical origin Numerous cases have been reported in which the symptoms involved both arms or both legs, or in other words, were paraplegic By Hart (l c) they were found to be as frequently paraplegic as hemiplegic 2 The tremor ceases during sleep i e, when the function of the hemisphere is least active but in cases in which tremor is known to be due to cortical involvement (case of Mills and Weisenburg, l c) the tremor does not disappear during sleep 3 When a case of paralysis agitans in which all four extremities are affected develops a hemiplegia, the tremor disappears on the paralyzed side Such cases are said to have been observed by Gowers[31] Westphal[40] and Grashey[43] This if invariably true proves that the nervous impulses which by their perversion cause the symptom originate in the cerebral cortex, but it does not prove where the perversion of impulse in this disease takes place Whether in origin transmission or in their reception ultimately by the mu[illegible] [illegible] of a complete cessation of the impulse [illegible] Hart reports a case in which the [illegible]

43 Berlin klin. Woch chr No 30

the paralyzed side after a hemiplegia and was apparently unaffected by it

Bychowski[32] adds the following reasons 4 The not uncommon combination of insanity, hysteria or brain disease with paralysis agitans Most authors regard this combination as decidedly uncommon 5 The parasthesiæ and subjective sensations of heat and cold These are generally considered as accompanying peripheral rather than cortical conditions 6 The constant failure of any change in the sphincter refleves This is of some importance as differentiating a spinal from a cortical origin, but would have no bearing if the lesion is outside the nervous system 7 The increased knee jerks The knee jerks in paralysis agitans are too variable to be used as an argument on which to base a pathology of the disease

Cuylits[49] considers the tremor of paralysis agitans as cortical in origin, and holds that the lesion consists of retraction of the dendritic processes of the cells and draws analogies to tremor seen in paresis, alcoholism, etc There is no pathologic evidence to support the theory of a cortical origin for the disease except the findings of Philip[30] Brissaud[50] believes that a lesion of the locus niger is the cause of the disease Tremors are produced by lesions in this region, but they are different from that of paralysis agitans and are not accompanied by the other symptoms of the disease Valery[51] considers that paralysis agitans is a syndrome due to a lesion in the mesencephalon, the syndrome being more or less complete, according to the extent of the lesion However, lesions of the mesencephalon are not found at necropsy

Ballet[52] and also Dana,[26] from pathologic evidence furnished by their own cases, place the chief lesion in the motor cells in the anterior horns of the spinal cord Ballet,[51] as a breaking of the processes, particularly the dendritic processes Dana[26] holds that

There is early functional disturbance and later a degeneration and destruction of the dendrites of the anterior horn cells which interferes with the even flow of motor impulses, and finally leads to motor weakness and rigidity, owing to the cell being practically cut off from the brain

From a pathologic standpoint this theory is not confirmed by any other observer, although especially looked for in my cases Clinically, it would seem that a tremor due to such a lesion, "which interferes with the even flow of motor impulses," would be rather of the intention type, and unlike that of paralysis agitans which momentarily disappears on voluntary movement

Redlich[24] believes that the overgrowth of the neuroglia in islets about the blood vessels in the lateral and posterior columns of the spinal cord accounts for the tremor and rigidity on the grounds of a functional weakening of the nerve fibers in their vicinity, thus producing a special type of dorsolateral sclerosis The rigidity of paralysis agitans, however, is very different from the spasticity due to lesion of the lateral column, and the pathologic findings of Redlich are not confirmed, indeed, are expressly denied by other observers (Dana[26]) I found a diffuse overgrowth of the neuroglia in the lateral and posterior columns in a number of cases, but not in the form of islets about the blood vessels except in one case

Gordinier[33] explains the tremor and rigidity as follows

The characteristic symptoms of this disease are due to one and the same cause, namely, an irritation from the presence of an increased amount of neuroglia in the posterior columns producing an excitability of the reflex collaterals of the posterior nerve roots arborizing about the ventral cornual cells which results in an increase in the normal rhythmic discharges of energy from those cells, producing at first the tremor and later the rigidity

Gordinier's case, the pathology of which is the basis of his hypothesis as to the causation of tremor and rigidity, was "a typical case without tremor"

Sander[8] thinks that the overgrowth of glia in the anterior horns by interfering with the connection between the upper and lower motor neuron, is the cause of the tremor and the difficulties in gait He examined the central nervous system from cases of senility with and without tremor and also paralysis agitans, in the cases of paralysis agitans and in those seniles in whom tremor had been marked, he found a special predilection of the glia proliferation for the gray matter This theory of Sander[8] takes no account of the clinical difference between paralysis agitans and senile tremor, and his pathologic findings lack confirmation

From the above summary it will be seen how diverse and contradictory are the pathologic findings in the central nervous system in paralysis agitans, but the explanation for this is simple Paralysis agitans is a disease that in almost every case begins late in life and is not rapidly fatal There are changes which occur in the central nervous system, as they do in other parts of the body with the advance of years, changes that are well known, though perhaps not well understood, and which consist, to state it in a few words, of a gradual replacement of the parenchymatous structure by the connective tissue of the part, in the nervous system by the neuroglia This change is modified, advanced or retarded, to an extent, by the mode of life, heredity, disease, etc Arteriosclerosis is usually found at this period of life, and also the incidence of wasting diseases and malignant new growths, which, by their toxic influence, are known to produce degenerative changes in the central nervous system These changes, the changes of senility variously modified by the other factors of which I have spoken, are the most constant findings in the central nervous system in paralysis agitans

Many men (Wollenberg,[1] Campbell,[53] Nonne[54] and others) have found changes similar to those found in paralysis agitans, in the spinal cords of seniles who during life had shown none of the symptoms of that disease. To reconcile this similarity in the findings with such distinct clinical differences, it has been held that the lesions in paralysis agitans are of precocious onset and exaggerated intensity, such a view is held by Dubief,[23] Jacobsohn,[55] Borgherini[25] and Ketscher[27] Against this, however, are the findings of Furstner,[6] who found no marked senile changes, Idelsohn,[46] and Schwenn,[44] whose patient died at 43½ years, and was therefore not a senile

That paralysis agitans is but senility, even though a precocious or special form of senility, I believe, with Dana,[26] "is contrary to all clinical experience" The lesions of senility found in the central nervous system in many cases are but natural when we consider the age of the patient at necropsy, and the same lesions are found in many seniles not the subject of the disease, while in those patients who die at an earlier age these changes

49 Presse Med. Belge Brussels 1897 xlix, p 121 124
50 Jour de Med. et de Chir Pratique 1894 p 641
51 Thèse de Paris 1904 Abs Rev Neurol 1905
52. Bull et Mem. Soc. Med. de Hôp de Paris, 1898 xv, pp 40 to 43.
53 Jour Ment. Sci., Oct 1894
54 Deutsch Ztschr f Nervenheilk xiv p 193, 1899
55 Berlin Klin. Wochschr, No 34 1886.

are not found Therefore, from a pathologic standpoint also, paralysis agitans and senility must be regarded as two different conditions

THE CHANGES IN THE MUSCLES

Oppenheim[56] gives as the characteristic symptoms of this disease tremor, muscular rigidity, which produces a peculiar position of the head, trunk and extremities, retardation and difficulty in active movements and a peculiar modification in gait The last two are the result of the former, so that really we have two, muscular rigidity and tremor According to the same author, even the subjective symptoms are due to the muscular rigidity and limitation of active motility Cases have been reported without tremor, so that it would seem that the muscular rigidity and its peculiar manifestations is the one absolutely characteristic symptom This rigidity is very different from spasticity, it is not under the influence of the will, is not increased by passive movement, nor is it affected by the mental state of the patient, and it is constantly, gradually progressive, all of which speaks for a muscular affection Blocq[46] was probably (so quoted by Redlich[24] and by Raymond[57]) the first to formulate the theory of a myopathy as the anatomic basis of the rigidity. He found distinct anomalies in the muscles, irregular atrophy and hypertrophy of the fibers, and proliferation of the sarcolemma nuclei Joffroy[35] had already noted similar changes in the muscles, and Borgherini[25] had observed "that in the muscle the connective tissue was increased, the muscle fibers were all somewhat delicate and some were intensely atrophied, showing vacuoles and increase in the number of sarcolemma nuclei" Burzio,[21] Redlich,[24] Pierret and Vessele,[58] Wollenberg,[1] v Sass[17] and others found similar changes in the muscles, and by Skoda,[4] E Leyden[59] and Ketscher[27] these changes were found combined with a fatty degeneration of the muscles Dana[26] found a fatty degeneration of the muscle which he decided could not be due to neuritis, for the nerve supplying that muscle was normal In Gordinier's[33] case the muscle was apparently not examined, as he makes no mention of it, and this unfortunately is true in many of the cases reported with necropsy

Schwenn[44] described changes in the muscles in his cases similar to those previously described, but called attention to the fact that the changes were not the same in all parts of the muscle, but were at various places at various levels He comes to the conclusion, on the ground of his own investigation, that the basic anatomic change in paralysis agitans is a severe progressive disease of the muscle which gradually involves the whole musculature He calls attention to the fact that evident changes are found in the muscles during life, and cites Blocq[46] and Borgherini[25] as having found changes in the electric irritability of the muscles Mendelsohn[60] observed an increase in the latent period in the diseased muscles Schwenn[44] also noted the resemblance to myotonia congenita, "in which many specific changes in the muscles are found," and also that the most common etiologic factors affect the muscles, trauma, strain, excessive use, etc Schiefferdecker[61] by his very careful pathologic studies, in which comparisons were made with normal control tissue and all the factors of postmortem rigidity, method of hardening, etc, were taken into account, concludes that

> Both myotonia congenita and paralysis agitans are diseases of the sarcoplasm and fibrillæ of the muscles In paralysis agitans, however, there is also a disease of the muscle fibers in the muscle spindles, although the nerve fibers both within and without the muscle spindles are normal

Idelsohn[45] describes his findings in the muscles as similar to those of Schiefferdecker,[61] increase in the number of sarcolemma nuclei, hyaline degeneration, swelling of the fibers with vacuolation, etc, and concludes that the anatomic lesion of Parkinson's disease is in the muscles

I was enabled to examine muscular tissue from 8 of the 14 cases with necropsy, in one other case a piece of muscle was removed from the forearm of a patient in the service of Dr W G Spiller at the Polyclinic Hospital The patient (E W) was 62 years old and had had paralysis agitans about three years The symptoms of the disease were typical, but otherwise the patient was in good health, and the muscle was removed by me for the purpose of this examination only I know of but two instances in the literature in which muscular tissue has been removed from the living patient for this purpose DeBuck and DeMoor,[62] quoted by Raymond [57] and Sanna Salaris,[63] "Note di istologia patologica (per biopsia) sulla fibra musculare striata nel morbo di Parkinson" The original of these papers in each instance is inaccessible to me In all I have examined the muscles from 9 cases of the disease and pathologic changes were present in every case

A summary of the condition of the muscles is as follows

Many of the muscle fibers were swollen, and in cross-section were round instead of having the normal polygonal shape There was a marked increase in the number of nuclei within the fibers, many of which were smaller, denser and rounder than the normal These nuclei were frequently in pairs or in long chains In several cases the fibers showed atrophic changes, and in these cases, usually of long-standing disease, there was an overgrowth of the connective tissue In many cases the fibers had a hyaloid appearance and the longitudinal striations were unusually well marked, and in many of the fibers there was a tendency to longitudinal cleavage In one case trichina spiralis was found in the muscle and in this case, in addition to the above described changes there was an intense interstitial myositis and also a discoidal degeneration of the muscle fibers Muscle spindles were hard to find in the sections from any of the cases, but in those examined the muscle fibers within them showed similar changes to those surrounding them The nerve fiber within the spindle was normal, and the intramuscular nerves showed no degeneration when stained with the Weigert hematoxylin stain These pathologic changes were not of the same intensity in all the muscles nor in different parts of the same muscle

My findings in the muscle agree generally with those of Schwenn [44] Schiefferdecker,[61] and Idelsohn [45] and indicate a definite and probably a specific change in the muscles in paralysis agitans, though the latter can not be regarded as proven Schiefferdecker[61] regards the lesions as different from those due to overactivity of the muscle v Sass[17] examined the muscle of a normal individual 93 years old as a control and

56 Lehrbuch der Nervenkrankheiten 4th ed Berlin 1905 ii p 1313
57 Article by Raymond Nouv Icon de la Salpêtrière January 1904
58 Thèse de Lyon 1881 Quoted by Raymond reference 57
59 Arch f Psych. u Nervenkrankh. vi 1876 p 293
60 Arch de Phys 1880 p 218
61 Deutsch Ztschr f Nervenheilk 1904 xxv No 1-4
62 Annals de l Soc. Med. de Gand June 1899 Quoted by Raymond reference 57
63 Riv di Patol nerv e Ment., August 1895 p

found decided differences between it and the muscle in paralysis agitans In paralysis agitans the fibers were filled with nuclei, and the small, round, dark-stained nuclei were particularly increased In the muscle of old age there was an increased number of spindle-shaped and large oval nuclei, but the small dark nuclei were absent

In a case of paraplegia due to peripheral obliterating arteritis in which I examined the muscles of the legs, I found differences from those in paralysis agitans in the increase of interstitial tissue and in the predominance of the rod-shaped nuclei over the small round nuclei The fatty degeneration of the muscle fibers found by Skoda,[4] Dana[26] and Ketscher[27] was found by the last named also in several patients with arteriosclerosis I found it present in a case of triplegia following hemiplegia reported by Dr Charles W Burr and myself before the American Neurological Association, June, 1906, and in this case it was regarded as due to the lack of nutrition to the muscles from shutting off of the blood supply by an intense peripheral arteriosclerosis There is not enough known of the pathology of the muscles to say that these changes described are specific in paralysis agitans, but they are co-existent and probably co-extensive with the symptoms rigidity and tremor, though it can not be definitely proven that they are the cause of these symptoms By some, the changes are regarded as caused by the tremor, the constant contraction of the muscle But in studying the pathology of disease of other organs of the body we usually attribute the functional changes observed to the lesion that is found if that lesion is adequate to explain the symptoms

Can we explain the symptoms of the disease by the anatomic findings in the muscles? The onset of the disease is usually gradual, with a gradual progression from muscle to muscle and from part to part, though it follows no regular course, sometimes being hemiplegic, sometimes paraplegic In this it resembles the rheumatic joint affections more than any other disease, and indeed it has been supposed to be due to similar toxin Occasionally the onset of the tremor is sudden, but this is explained on the theory of a muscular affection in the same way that a sudden onset is explained by those who hold the opinion that the disease is due to overgrowth of the neuroglia in the cord, etc, and that is that the prodromal symptoms had gone unnoticed The most characteristic symptom of the disease is the muscular rigidity, and on this symptom most of the other symptoms depend In the course of the disease it gradually increases and extends in limits so as finally to involve all the muscles in the body except the unstriated It is not spasticity, the resistance is the same whether the limb be moved quickly or slowly It has something of the complete loss of life or elasticity that is felt when a lead pipe is bent. I have found a quantitative change in the irritability of the muscle to the Faradic current in several cases in which the disease was of long duration "The electric irritability is little affected except toward the end, when there is a quantitative change" (Wollenberg) This, however, is no argument against a local affection of the muscles, as in the muscular dystrophies the electric irritability is equally little affected The tendon reflexes are usually normal in both diseases, unless the muscles concerned in the reflex become implicated, and the cases in which they are exaggerated in paralysis agitans really prove nothing, since senile without symptoms of paralysis agitans often show increased knee jerks All the clinical evidence points to the rigidity as being due wholly to an affection of the muscles Actual paralysis is very rare in paralysis agitans, and when it occurs is usually limited to one muscle, as in the case reported by Moncorge[64] of complete paralysis of the right serratus magnus

Schiefferdecker[61] and others suggest that the pathologic change in the muscle spindles is the anatomic basis of the tremor It is a very important point that the changes in the muscles in paralysis agitans differ from those found in myotonia congenita only in an involvement of the muscle spindles in the former and not in the latter Sherrington[65] says that the muscle spindles are undoubtedly sensory end organs, and Schiefferdecker[61] quotes Baum[66] as stating that they are organs of muscle sense Langerhans[67] comes to the conclusion that they are organs of muscle sense, and that they cause or regulate the muscle tone. As it is generally admitted that the tremor in paralysis agitans is due to a pathologic condition which affects the neuromuscular mechanism that maintains muscle tone, the lesion of the muscle spindles affords a reasonable explanation of the tremor Another important point tending to prove that there is a relation between the tremor and the lesion of the muscle spindle, and one that I have not seen noted elsewhere, is that the tremor almost always begins in the muscle where the muscle spindles are most abundant, and does not affect those muscles which contain no muscle spindles Both Millbacher[68] and Frankel[69] found the muscle spindles to be most abundant in the muscles that move the thumb Batten[70] found them most abundant in the small muscles of the hand and in the biceps They were not able to find any in the diaphragm or in the masseter muscles Siemerling,[71] in a case of gumma of the base of the brain, described a rather doubtful muscle spindle in the inferior rectus muscle in one eye, but neither Millbacher, Frankel, Batten nor Sherrington could find any spindles in the ocular muscles, though Sherrington found tendon organs there. William Hirsch,[72] writing on paralysis agitans in Posey and Spiller's "The Eye and the Nervous System, Their Diagnostic Relations," says

> To the tremor would apparently correspond nystagmus but this symptom has never been observed in paralysis agitans This fact furnishes another proof for the assumption that nystagmus is produced by some central lesion and not by a disturbance in the general muscular tonus, because if the latter view were correct we would be bound to observe the symptom at least occasionally in paralysis agitans

Inferentially, therefore, the tremor in paralysis agitans is due to a disturbance of muscular tonus, which is not operative in the ocular muscles, and the only apparent reason why it should not do so is because of the absence of muscle spindles M Koenig,[73] Debove[74] and Galezowski,[75] writing on the visual or ocular symptoms of paralysis agitans, describe rigidity of the ocular muscles and difficulties in movement due to this rigidity, but do not describe any thing that corresponds to the typical tremor as it occurs in the extremities Batten[70] states that he could find no muscle spindles in the intrinsic

64 Lyon Med No 6 1891
65 Jour of Physiol 1894 xvii p 237
66 Anat. Heft, 1900
67 Virchow's Arch. 1897 cxlix No 1
68 Deutsch Arch f klin Med. 1882 xxx p 304
69 Virchow's Arch 1878 lxxiii p 380
70 Brain 1897
71 Arch f Psych 1888 xix, p 401
72. "The Eye and the Nervous System Their Diagnostic Relations." Philadelphia, 1906 p 477
73 Bull Med 1893 p 508
74 Progrès Méd 1878 No 7
75 Rec. d. Ophthal., February 1891 p 72, also Bull. Med 1891

muscles of the tongue Forster[76] found them in the hinder part of the tongue, which muscles, when the two sides act in unison, protrude the tongue and draw it back The usual tremor of the tongue in paralysis agitans on protrusion is a piston-like forward and backward movement, and thus here again the peculiar distribution of the muscle spindles bears an apparent relation to the muscles affected by the tremor The tremor of paralysis agitans has certain peculiarities that are easily explained on the ground that it is due to an affection of the muscle spindles, and in much the same way as they are explained by those who hold that the lesions in the cord are responsible for the tremor In either case it is admitted that the tremor is due to interference or a change in the impulses that maintain or regulate muscle tone, so that the tremor stops when the muscles are relaxed in sleep, or when a hemiplegia stops them completely on the paralyzed side, or when the impulse for a voluntary act supersedes, momentarily, the regular reflex

Many of the symptoms of paralysis agitans are easily recognized as due to the muscular tremor and the muscular rigidity, such as the peculiarities in gait, the position the facies, the ocular symptoms, etc. Other symptoms that are not so obviously due to the two primary symptoms are seen to be so on a careful analysis, thus Catola[77] comes to the conclusion that the salivation is due first, to tremor of the lips, cheeks and tongue, second, to rigidity of the same organs and of the muscles of the pharynx, with more or less complete interference with the movements of deglutition The recumbent position of the patient permits the saliva to descend to the posterior part of the pharynx and so stimulates the reflex for deglutition Other conditions often arise in paralysis agitans which are by some regarded as symptoms, but which might more reasonably be looked on as complications M A Soques[78] has recently called attention to the syndrome of labioglossolaryngeal palsy occurring as a symptom of paralysis agitans, and quotes Bruns[78] as having found it in 4 cases in 74 There are not the characteristics of a true bulbar palsy, but rather a pseudo-bulbar palsy Dejerine, in a discussion of this paper, considers the syndrome as a complication and called attention to the fact that many patients with paralysis agitans also have arteriosclerosis and are in a condition favorable for the production of a pseudo-bulbar palsy The paresthesiæ, the sensations of heat and cold might well be considered as complications due to the age of the patient rather than symptoms of the disease In an analysis of 219 cases, Hart[79] found sensations of heat in only 31, sensations of cold in 20, and both kinds in 20 Sensations of heat and cold are not at all uncommon in many people of advanced age

It may be that the same factor which produced the changes in the muscles also makes itself felt in other ways, in producing a thickening or a loss of elasticity in the skin, for instance Frankel,[80] in calling attention to the loss of elasticity of the skin in paralysis agitans says "that perhaps the muscle fibers are altered by the same influence" A M Luzzato[81] found that in a case of paralysis agitans combined with a scleroderma both were improved for a time by the administration of arsenic A histologic examination threw no light on the pathogenesis of the condition, but he concludes that it was a double expression of one morbid state

THE PATHOGENESIS OF THE DISEASE

Two general hypotheses may be considered as to the underlying cause of the changes in the muscles First, there may be a primary degeneration of the muscles themselves, an abiotrophy, affecting the muscles analogous to that in the muscular dystrophies Beginning in a muscle frequently after some slight local exciting cause it gradually progresses from part to part It may well be that people are born with muscles which lose their elasticity more quickly than the muscle of other people, either by use or through other causes that we know little about The property of elasticity of a muscle has been shown experimentally to be lost by over-extension and is subject to various influences

A second hypothesis is that there is a toxin circulating in the body which causes these changes in the muscles The idea of a toxin as the underlying pathogeny of the disease has been widely held Dana[20] says

> Perhaps the primary infection in paralysis agitans is some autochthonous poison allied to that of rheumatism, at any rate there is no other preceding history that is so often obtainable as that of rheumatism, and there are many facts in the clinical history of the disease which suggest a relationship between paralysis agitans and that form of rheumatic manifestation which is known as rheumatoid arthritis

Spiller[82] has called attention to the points of resemblance between paralysis agitans and rheumatoid arthritis

The examination of the excretion in paralysis agitans has produced some results of interest Gauthier[83] found an increase of phosphoric acid in the urine in cases of paralysis agitans which suggested to him that the muscular changes may be due to an excess of the same in the muscles His conclusions were that

> *The symptoms are due exclusively to the changes in the* muscular system and derived from the muscular rigidity This rigidity, the most important phenomenon of the disease, is produced in the muscles without the intervention of the nervous system and is due to an excess of phosphates

Cheron[84] had called attention in 1877 to the increased amount of phosphates in the urine, but by him they were considered as affecting the central nervous system, and so producing the symptoms of the disease. G Gurtler,[85] C A Ewald[86] Giovanni Setti[87] and Decombrel[75] found no increase of phosphates in the urine Researches in the contents of the urinary excretion in paralysis agitans have also been carried out by Mosse and Bauel,[88] who found an increase of the completely oxidized phosphates, but a corresponding diminution in the incompletely oxidized, and by J Leva[89] and R Bandeio,[90] who found it negative

In poisoning by phosphorus (Siemerling,[91] also Langerhans[67]), the muscle fibers within the muscle spindles are affected, as well as those outside, which is similar to the effect produced in paralysis agitans It may be well here to call attention to the remarkable immunity enjoyed by the muscle spindle in various

76. Virchow's Archiv cxxxvii p 121 1894
77 Rev Neur 1905 xiii p 138
78 Article by Soques M A. Rev Neurol 1905 xiii p 135
79 Jour of Nerv and Ment Dis. 1904 v No 31 p 177
80 Deutsch Ztschr f Nervenheilk., 1899 p. 430
81. Il Morgagni, 1904 p. 753 abs. in Rev Neurol., 1905

82. Univ Penn. Med. Bull., May 1904
83 Lyon Med 1888 No 35-36
84 Le Progrès Méd 1887 No 48
85 Arch f. Psych xiv 1888.
86 Berlin klin Wochschr 1883 No 32 33
87 Arch. Ital di clin Med. xxxvi p 262. Quoted by Schwenn reference 44
88 Rev de Med July 1889 p 583
89 Deutsch Ztschr f. Nervenheilk. 1892, ii No 1 p 75
90 Gaz. hebd de Sci Med de Bord., 1905 xxvi, 291 293.
91 Charite Annalen," 1889 p 443

nervous affections, even when the muscle itself is severely atrophied or even in primary muscle affections, such as the muscular dystrophies Roth[92] found them normal in a case of alcoholism, a case of progressive muscular atrophy, and in a woman who died of inanition consequent on a pyloric stenosis Siemerling,[93] in a case of spinal neuritic muscular atrophy, in which he found an intense atrophy of the muscles and a complete degeneration of the intramuscular nerves, found the muscle spindle "entirely unchanged" Blocq and Marinesco[94] found them present in cases of poliomyelitis and polyneuritis when there was total degeneration of all the other muscle fibers Spiller[95] found them normal in a case of intense progressive muscular dystrophy with contractures, in which there was no other normal muscular tissue Grunbaum,[96] in a case of pseudo-muscular hypertrophy, with great changes in the muscles, found that both muscles fibers and the nerve within the spindles were normal V Horsley[96] found the muscle spindles merely shrunken after division of the nerve in dogs This immunity of the muscle spindle in degeneration of the muscle consequent on nervous lesions and in the ordinary muscular dystrophies is in marked contrast to the decided effect produced by toxic substances, but there is not sufficient evidence, and what there is is too contradictory to uphold the opinion of Gauthier that the degeneration of the muscles and muscle spindles in paralysis agitans is due to phosphoric acid or one of its compounds The idea that it is due to some toxic substance, however, receives confirmation

Under the head of circulating toxic substances may be classed defective or changed internal secretions Fibrous changes in the ovaries or testicles are regularly found at necropsy in cases of paralysis agitans, but they show no differences from the changes of senility, which in all probability they are The extirpation of the testicles or ovaries produces no symptoms in any way similar to paralysis agitans, and the injection of such substances as Brown-Sequard extract, on purely empirical grounds it would seem is, so far as I know, of no benefit in this disease Moebius,[97] in 1883 (quoted by Raymond[57]) reported a case of paralysis agitans combined with Basedow's disease and opined that paralysis agitans was due to an alteration in some glandular secretion Lundborg[98] reported a case of paralysis agitans combined with myxedematous symptoms, and at necropsy found atrophy and cystic changes in the thyroid, which led him to believe that the thyroid gland plays an important part in paralysis agitans Langerhans[97] found that in cretins there was a fatty degeneration of all the muscles except the tongue, cricothyroid, thyrohyoid, and rectus abdominus muscles which was similar to the general fatty degeneration of the muscles seen in phosphorus poisoning and in which the muscles fibers in the muscles spindles also took part Askanazy,[99] in a pathologic study of Basedow's disease with special reference to the muscle changes in the disease, found that the muscles fibers were atrophied and had undergone a fatty metamorphosis, the striations were lost and the fibers appeared homogeneous, there was vacuolation of the muscle fibers and proliferation and degenerative changes in the sarcolemma nuclei The muscles fibers in the muscle spindles showed the same changes as those about them He noted a marked tremor of the hands in his case Castelvi[100] reported pathologic alterations of the thyroid in two cases of paralysis agitans There are several facts against any change in the internal secretion of the thyroid gland operating as the cause of paralysis agitans The symptoms which accompany marked disease or even total destruction of the gland are not similar to those of paralysis agitans, Alquier[101] has examined the thyroid and adrenal glands from cases of paralysis agitans and found not the slightest alteration In the two cases in which I had examined the thyroid glands there was a simple colloid degeneration in each case, not accompanied by gross enlargement of the gland, and probably a senile change Thyroid therapy has generally been barren of results

The numerous cases reported of a combination of paralysis agitans with symptoms of myxedema or Graves' disease and the fact that the muscle changes observed by Askanazy[99] are similar to those in paralysis agitans lead to the conclusion that there is some intimate relation in their causes and as a logical result to an investigation of the parathyroid glands The parathyroid glands have gradually assumed a position of great importance in pathology since their discovery by Sandstrom They were at first supposed to be accessory or embryonic thyroids Welch (cited by Richardson[102]) considers that anatomically the parathyroid glands resemble the anterior lobe of the pituitary body, and that unlike the thyroid the presence of a colloid material in the gland is retrograde or degenerative in its nature Richardson[102] quotes Gley, an early investigator of the subject, as holding the opinion, supported by physiologic experiments, that the parathyroids are glands *sui generis* and have a specific function related to that of the thyroids That the removal of the thyroids in one case and the parathyroids in another produces very different results is also proven In a personal communication Dr W S Carter, now of the University of Texas, Galveston, from his experiments performed on dogs while at the University of Pennsylvania, concludes that "the parathyroids are more important than the thyroids, that the acute nervous symptoms in dogs which follow total extirpation of both thyroids and all four parathyroids are due to the removal of the latter bodies and not to the former Total parathyroidectomy without thyroidectomy produces tetany and death just as certainly as the total extirpation of both sets of bodies On the other hand extirpation of the two thyroids leaving one or two external parathyroids with the circulation intact may cause transitory symptoms from the accidental injury to the parathyroids at the time of operation, but I have had such animals live for months in perfect health The subsequent removal of the remaining one or two external parathyroids would then produce the characteristic tetany and death within a few days" These results are in accord with those obtained by other investigators

Richardson[102] gives the acute symptoms in a parathyroidectomized dog as tremor, rigidity, convulsions, dyspnea, and death With due allowance for the sudden onset and complete removal of the gland in these experiments compared to the more gradual destruction of the gland by a pathologic process, from all the descriptions given, the symptoms presented by a parathy-

92 Centralbl f die med Wissensch 1887 p 129
93 Arch. f Psych u. Nervenkrankh. xxxi No 1 2 p 105
94 Soc. de Biol 1890 p 398 Quoted by Batten reference 70
95 Jour Nerv and Ment. Dis. October 1897
96 Brain Autumn 1897
97 Memorabilien 1883 Quoted by Raymond, reference 57
98 Deutsch Ztschr f Nervenheilk 1901 xix p 268
99 Deutsch. Arch. f. klin. Med 1898 lxi p 118

100 Riv de Med. y P Cirugia practicas, Madrid 1903 abs in Rev Neurol 1904 p 141
101 Thèse de Paris 1903 Rev Neurol 1904 p 438
102 The Thyroid and Parathyroid Glands Philadelphia, 1905.

roidectomized animal are very similar to those of paralysis agitans In the picture of a monkey in this tetanic condition (v Eiselsberg reproduced by Richardson[102]) there are seen many resemblances to the characteristic position of a patient with paralysis agitans the head and back bent forward, the joints of the extremities in flexion, the general appearance of rigidity and even the ulnar deviation of the hands So far as I know, Lundborg[103] in 1904 was the first to call attention to the resemblance between the symptoms of paralysis agitans and the effects of parathyroidectomy in animals, and he arrived at the conclusions that "paralysis agitans is probably a chronic, progressive hypoparathyroidismus" Berkley[104] also noted this similarity in symptoms and reports eleven cases of paralysis agitans treated with parathyroid extract, nine were benefited and he refers to one very early patient who considered himself cured These results of Berkley assume more importance in throwing light on the pathogenesis of the disease when we recollect the uniformly discouraging results of treatment with the other glandular extracts Neither Lundborg or Berkley had any pathologic evidence to support their conclusions

I was able to examine the parathyroid glands from two of my cases, and in the opinion of Dr Allen J Smith, professor of pathology at the University of Pennsylvania, they were both in a distinctly pathologic condition In one there was some colloid material which, according to Welch, indicates a degenerative condition, but in both these cases there was a peculiar infiltration with fat, especially in relation to the blood vessels This pathologic evidence of disease of the parathyroid in paralysis agitans, when considered together with the experimental evidence quoted and the therapeutic results of Berkley, suggests that the parathyroid glands play an important part in the pathogenesis of paralysis agitans

CONCLUSIONS

1 Paralysis agitans is not a neurosis nor is it senility

2 The anatomic basis of the symptoms, muscular rigidity, tremor, and the symptoms dependent on them, lies in the affection of the muscles

3 The disease itself is probably a general toxemia and there is suggestive evidence that it is due to alteration in the secretion of the parathyroid glands

I have to thank Drs W G Spiller, Charles K Mills, Charles W Burr, James Hendrie Lloyd, Charles S Potts, D J McCarthy, T H Weisenburg, and J H W Rhein for referring to me the pathologic material on which this research is based, and especially to thank Dr William G Spiller and Dr Allen J Smith for verifying the pathologic findings

DISCUSSION

Dr D J McCarthy, Philadelphia, said that he does not agree with Dr Camp in describing this condition as a purely muscular disease While the theory, of course, of inelasticity of the muscles will hold good in certain directions, yet there are certain nervous manifestations which, he thinks, can not be explained by the condition of the muscles The loss of elasticity, of course will explain a decrease, but the reflexes are often increased, and it will not explain the tremor It does not explain the sensory and trophic disturbances so often noted The changes in the nervous system bear a more intimate relation to the disease than the changes in the muscles In reference to Dr Camp's statement that the disease is not one which occurs in the young, Dr McCarthy recalled a case in which paralysis agitans developed before the patient, a man, was 30 years of age The individual had worked in lead for many years from boyhood, and before the development of the disease he had extensive arteriosclerosis

Dr C D Camp, Philadelphia, said that the anatomic basis of the muscular rigidity and the tremor in paralysis agitans is in the muscles, as against this Dr McCarthy has mentioned exaggeration of the knee jerks, but most observers are agreed that the knee jerks are generally normal in this affection There is no reason why the same influence or toxin that produces the degenerative change in the muscles should not also produce secretory and other similar symptoms The origin of this toxin is not known, but Dr Camp called attention to the evidence which seems to connect it with the parathyroid glands, and to the very suggestive changes in the parathyroid glands found in his cases The pathologic conditions in the central nervous system are the changes of senility, they are not constant in paralysis agitans, and they are found in old people who during life had none of the symptoms of paralysis agitans It is generally agreed that the tremor in the disease is caused by some lesion in the neuromuscular mechanism that regulates muscle tone, but in sleep the muscles are relaxed and consequently the tremor stops Muscle tone is increased on excitement, so is the tremor It is evident that the cerebrum has a marked influence on muscle tone, but while such impulses probably originate there, the perversion which causes the tremor may be due to a lesion either in the spinal cord or in the muscles where they are received There is no necessity for the perversion to occur at their origin, in order to act normally the impulses must be normally transmitted and received, but a lesion in the internal capsule by completely stopping all impulses naturally stops the tremor This explains those cases in which a tremor affected all four extremities, but after the occurrence of the hemiplegia the tremor stopped on the paralyzed side

103 Deutsch Ztschr f Nervenheilk, 1904
104 Med. News, Dec. 2 1905

ACUTE OTITIS MEDIA.*

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The various forms of otitis media depend not only on their varied etiology but also on their management and treatment They depend also on the systemic condition of the patient as well as on the duration of the disease

ETIOLOGY

A few cases are the result of direct injury, but the greatest number are the result of a specific infection, and are usually secondary to some nasal or pharyngeal disease, such as catarrh, adenoids or Eustachian tube disease, which is usually secondary to nose or throat disease Nasal obstruction is an extremely frequent cause of otitis media, because it interferes with the ventilation of the Eustachian tube, and stenosis of the tube means an inability of the middle ear to drain itself By this means various bacteria, pathogenic and otherwise, gain entrance into the middle ear and set up an inflammation Chilling of the body and ill advised baths, as river bathing out of season, is also a frequent cause of otitis media

But besides the Eustachian tube there are two other ways by which bacteria may gain entrance to the tympanic cavity, namely, by the external canal through a perforated drum, and by way of the blood and lymph stream The latter, however, is very rare, but sometimes occurs in syphilis We assume and believe that every case of otitis media is the result of a bacterium of some

* Read before the Floyd County Medical Society

kind Bacteria may be found in any and all throats and noses, and yet if the Eustachian tube is healthy and properly performs its functions of ventilation and drainage, the middle ear is apt to escape injury, especially if there is no systemic disease to lower the local resistance. The systemic condition may influence the form of trouble as well as the progress and prognosis of the case

Simple otitis media may result from any of the foregoing causes, and is known by the following pathologic conditions swelling, redness, infiltration and exudation of the intra-tympanic mucous membrane and patches of broken down epithelium The bony wall also partakes of this pathologic state The exudate contains mucous, blood and sometimes pus and various bacteria and varies in color accordingly

SYMPTOMS AND COURSE.

The important symptoms are paroxysmal pulsating pain in ear and face, worse toward evening, in children often accompanied by high fever, delirium and convulsions On examination with the speculum or, what is better, Seigle's otoscope, we find the drum is red and bulging, if it is not badly retracted from former diseases Especially is this true of its postero-superior-quadrant. As a rule, all the landmarks are obliterated except the short process which appears as a yellow spot. The hearing is rapidly impaired

If the case runs a favorable course the pain and redness of the drum grow gradually less in three or four days, though the hearing may be unimproved, but recovery takes place in about four weeks This condition is distinguished from myringitis by the greater impairment of hearing and increased tympanic distension If it runs an unfavorable course it may last indefinitely

TREATMENT

In the acute simple otitis media this consists of alleviating the pain and treating the nose and throat with cleansing antiphlogistic agents, to facilitate drainage and ventilation to the tympanum by the Eustachian tube as soon as possible The pain is best relieved by instilling within the external canal a 4 per cent solution of cocain, preceding it with a douche of hot boric acid solution, having the patient lie on the opposite side to the one affected, and then applying heat and repeating the douche and cocain frequently if necessary If the bulging of the drum and the pain increases after thirty-six hours treatment, then do a myringotomy and drain thoroughly, making the incision in the most dependent part of the bulged portion of the drum, which will usually be found in the postero-inferior-quadrant. Myringotomy can be done without pain after the instillation of a 10 per cent. solution of cocain with a 1-1,000 solution of adrenalin If the drum is not incised it will finally rupture and slough with ragged edges and frequently does not close, leaving the ear exposed to the constant danger of infection By relieving the intra-tympanic pressure and tension of the membrane by means of the incision the nutrition and reparative power of the drum are preserved, and, as any clean-cut wound will heal more quickly and surely than one made by sloughing, we shall, therefore, lessen the danger of permanent perforation But more important than all, by early incision we lessen the danger of bacterial invasion of the mastoid cells with its consequent mastoiditis The cavity should be evacuated and good drainage kept by aspiration and by douching with warm antiseptics Hydrogen peroxid may be used as a cleansing agent and the ear mopped out with dry cotton until it is perfectly clean, then with a hand powder-blower fill the canal one-third full of boric acid and insert cotton This treatment and dressing should be performed by the doctor or nurse, otherwise it is poorly done When the discharge has ceased use 10 per cent ichthyol in liquid petrolatum instead of the powder and continue until the drum is healed, during which time the nose and throat must be constantly treated We now begin with special measures to restore hearing, then after each nasopharyngeal treatment we practice Politzerization, which has for its special object free ventilation of the tympanic cavity Do not depend on the family for any part of the treatment, if you do you will fail If tympanic ventilation is interfered with by stenosis of the Eustachian tube it must be opened or closing of the drum will not take place, and then we must remove any and all naso-pharyngeal obstructions, such as adenoids, enlarged tonsils, septal spurs, enlarged turbinates, polypi, deviated septum, etc If there is simply a Eustachian salpingitis we may have to resort to bougies As these naso-pharyngeal abnormalities are the greatest cause of tympanic disease, as well as of many other troubles, it is far more expedient to remove them than to wait and only partially succeed in restoring the middle ear after it has been disturbed by these abnormalities Every pathologic pharyngeal condition promptly treated as it arises will greatly reduce chronic middle-ear disease.

PROGNOSIS

In simple acute otitis media the prognosis is good if the trouble is properly treated early and continuously If it is neglected for two or three weeks it goes on to perforation, partial destruction of the middle ear, and may merge into chronicity This, if it occurs, is troublesome to deal with and often involves the mastoid In neglected perforative otitis media, which is apt to involve the accessory cavities and mastoid cells, we have a disease which is most serious, and yet parents, and sometimes physicians, will say, "Oh, the child will outgrow it, and you can't treat it successfully anyway" Why not say the child will outgrow a broken leg or a depressed skull or a cleft palate. It is nearly as rational It is a formidable and difficult disease with which to deal, and owing to its intra-osseous location it becomes necessary to be persistent and aggressive and sometimes radical in its treatment, and often mastoidotomy is a conservative instead of a radical mode of treatment.

In cases of acute purulent otitis media and mastoiditis what are the purposes of opening the mastoid? First, to promote better drainage, second, to limit the extension of the infection, third, to remove necrosed bone and promote early healing The indications for opening the mastoid in acute mastoiditis are First, tenderness over the antrum, persisting for three days, after freely incising Shrapnell's membrane Second, if the discharge from the ear suddenly grows much less while other symptoms remain, with an elevation of temperature, chills and sweats, denoting the opening up of the new channels and fields of infection Third, a flow of pus too great to have been produced by so small a cavity as the tympanus, indicating invasion of the cells Fourth, many surgeons regard a bulging of the postero-superior wall of the canal as a positive sign of mastoid disease and indicating interference, a few say it sometimes occurs with simple otitis media.

It seems rational to make it a rule to at least drain and remove necrosed bone in every case of true purulent mastoiditis, and although many cases recover without interference, it is certainly a long tedious and dangerous route To say the least, such patients should be under the immediate attention of a surgeon until recovery is complete Like appendicitis, its progress is insidious and its ravages hidden to an ordinary observer, until the mastoid has been explored and if mastoid surgery fails, it is usually because it has been postponed too long or the exploration has not been thorough and some foci of infection have not been found The way to success in otology is to never let an acute otitis become chronic

As the general practitioner is apt to see the case first it behooves him to be vigilant and prompt in treatment and advice, so that no time be lost, for the earlier pathologic condition is much more amenable to treatment and yields a more pronounced success, while neglected cases last a long time and have an uncertain outcome.

DIFFERENCES IN THE PHYSIOLOGIC ACTION OF THE SALTS OF AN ALKALOID *

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Whether or not all the salts of an alkaloid, when the differences in their solubilities are excluded, have the same physiologic action is a question which is usually evaded in text-books on pharmacology and therapeutics It is the general opinion that all the salts of an alkaloid, in the doses in which they are ordinarily administered, do have, aside from the local effect due to differences in solubility, the same action Cushny,[1] speaking of the excessively bitter taste of quinin, says that it may be prescribed as a salt of tannic acid This salt is exceedingly insoluble and is consequently almost tasteless The pure alkaloid may be advantageously used for the same purpose and for the same reason Where a rapid action is desired, a freely soluble salt—as the hydrochlorid, the bisulphate or the hydrobromate—is usually employed Such salts as the above are the ones which are usually chosen for hypodermic administration The only questions considered are whether it is sufficiently soluble and whether it is non-irritating

Such statements are a fair example of the ordinary text-book descriptions of the different actions and indications for the use of the various salts of an alkaloid It is not uncommon, though, for a physician to use one salt of an alkaloid to the exclusion of all others, because he believes he gets better results with it, while another doctor may be of the same opinion regarding a different salt of the same alkaloid One point which the average physician may tend to ignore is that when a definite quantity of the salt of an alkaloid is given, unequal amounts of the alkaloid are administered. For example, when one-sixtieth of a grain of strychnin hydrochlorid is administered, more of the pure alkaloidal strychnin is given than when a sixtieth of a grain of strychnin salicylate is dispensed

I have long been of the opinion that it is probable, especially with those alkaloids which are administered in considerable quantities, that there are different quantitative effects depending on the acid with which the alkaloid is combined

TABLE 1.

Solutions Used	CC of Oxygen Freed in					
	M/8		M/64		M/512	
	2 m	5 m	2 m	5 m	2 m	5 m.
Sodium nitrate	0	0¼	0	0½	4	7
Sodium chlorate	0½	1	1	3	3	5
Sodium formate	1	2	1	3	3	7
Sodium chlorid	1	3	7	15	14	33
Sodium fluorid	2	4	4	9	4	9
Sodium bromid	4	8	9	18	13	31
Sodium sulphate	11	24	12	25	14	32
Distilled water	14	33	14	33	14	33
Sodium sulphite	19	35	14	31	13	34
Sodium acetate	26	53	30	55	25	48
Sodium hyposulphite	30	60	20	42	14	33
Sodium succinate	31	60	32	55	16	36
Sodium tartrate	42	60	33	60	14	35
Sodium valerianate	42	60	39	65	24	50
Sodium butyrate	45	55	37	52	35	50
Sodium oxalate	40	70	44	65	12	33
Sodium citrate	42	71	45	75	14	38
Sodium phosphate	40	70	55		20	35
Sodium carbonate	50		50		40	70

TABLE 2

Solutions Used	CC of Oxygen Set Free in							
	N/100		N/500		N/2500		N/10000	
	2 m	5 m	2 m	5 m	2 m	5 m	2 m	5 m.
Strychnin nitrate	2	15	4	20	5	25	6	30
Strychnin chlorid	8	36	8	38	9	40	8	37
Distilled water	9	36						
Strychnin (purum)			11	42	8	36	9	37
Strychnin phosphate	10	38	10	39	9	36	8	36
Strychnin citrate	12	43	13	40	11	47	8	38
Strychnin sulphate	18	56	10	35	10	4[illegible]	9	38
Strychnin arsenate	20	58	11	44	10	43	10	37
Strychnin valerianate	24	49	28	60	17	55	15	60
Strychnin salicylate			25	60	10	46	8	35
Strychnin acetate	35	70	29	58	18	41	9	36

TABLE 3

Solutions Used.	CC of Oxygen Set Free in									
	N/100		N/500		N/2500		N/10000		N/2,000	
	1 m.	2 m	1 m	2 m	1 m	2 m	1 m	2 m	1 m	2 m
Caffein nitrate					1	6	5	18	7	25
Caffein sulphate		1		2	2	7	5	26	9	30
Caffein salicylate		2		6	6	30	8	35	9	37
Caffein bromid		1	1	5	5	25	7	30	8	32
Caffein chlorid		2	1	6	7	30	8	35	9	36
Caffein citrate		1	2	7	5	17	8	34	9	30
Caffein arsenate	1	2	8	7	6	32	7	33	9	36
Caffein benzoate	1	7	4	15	7	25	8	35	9	37
Caffein valerianate	2	12	6	26	8	34	9	36	9	37
Caffein (purum)	10	40	10	39	9	38	9	37	10	36
Distilled water	9	36								

Apropos of some work[2] which I was doing with Nielson on the effects of various salt solutions on enzymatic and catalytic action, the various obtainable salts[3] of strychnin and caffein were also tried in the same way In tables Nos 1, 2 and 3 are given the results of a list of sodium, of strychnin and of caffein salts, respectively, on the splitting of hydrogen dioxid by a watery extract of kidney or pancreas These tables are introduced for the sake of making a comparison of these results with those which are given in the experimental portion of the paper

* From the Department of Physiology of St. Louis University

1 Cushny Text book of Pharmacology and Therapeutics 3d edition p. 868

2. Nielson and Brown Am Jour of Phys., vol xii 1904 p 374.

3 Brown and Nielson Ibid., vol xiii, 1905 p 427

METHODS

The easily obtainable salts of the alkaloids morphin, strychnin and quinin were used The solutions were made in fractional normal concentrations By this method a solution of every salt of an alkaloid, of a certain designated concentration has the same amount of the free alkaloid as a solution of the same concentration of every other salt of the same alkaloid For illustration, a N/1000 solution of quinin sulphate contains the same amount of the alkaloid as an N/1000 solution of quinin valerianate, notwithstanding the inequality in the molecular weights of sulphuric acid and valeric acid The calculations of the molecular weights were made from the formulas given in Merck's (1902) Index

The solutions were tested on paramecia These animalcules were selected because they could be obtained in a reasonably pure solution They are skimmed from the top of the solution in which they have been growing and are placed in a vessel with its greatest dimension in the vertical direction Preferably a small-mouthed flask is used The organisms are thus obtained in considerable numbers in a single drop from the upper layers of the solution in this vessel In this way other organic material in the liquid was allowed to settle to the bottom and be separated from the paramecia. The organisms are of such a size that they are easily seen under the lower power of a microscope, and, since when alive they are always moving, their ceasing to move is a reliable index of the toxic effects of the solution A simple unicellular organism of this sort gives more accurate results than a more complex organism would, as the possibility of chemical reactions of the alkaloid with elements of the organism are less likely to occur

Into a flatbottomed saltcellar of about 10 c c. capacity were placed 5 c c of the solution to be tested The vessel was then placed on the stage of a microscope under a low power One, two or three drops of the paramecia, depending on the number of organisms in a drop, were then put into the solution, which was instantly stirred The exact time of the introduction of the drop of paramecia into the solution was noted

It was easy to see through the microscope when the death of the organisms occurred. The testing of all the solutions in one concentration was carried out with the conditions constant throughout The paramecia were taken from the same culture, the same number of drops were put into each solution, and each test was performed the same day and as nearly at the same hour of the day as was possible In the instances where the drug did not act too rapidly each member of a series of tests was carried out at the same time

EXPERIMENTAL RESULTS

The results obtained in the various tests are indicated by tables Nos 4, 5 and 6, the data of which were selected from the results of the numerous experiments performed.

Table 4 shows that paramecia are not very susceptible to the solutions of morphin salts An exposure of 24 hours to the salts, however, suffice to kill the major portion of the organisms in any one of the solutions, except that of morphin acetate There is noticed that during the first two hours' exposure of the organisms to the solutions many more have perished in one solution than in another The toxicity of the morphin salts in solution in N/100 concentration increase as follows

The least toxic is the acetate, followed by the valerianate, ferrocyanid, tartrate, bromid, sulphate, phthalate and meconate, in the order named. By reference to the table the exact relation of one solution to the other can be discerned

TABLE 4

Solutions and Concentrations Used	Percentage of Paramecia Dead				
	2 hrs.	3 hrs	7 hrs	12 hrs	24 hrs
n/100 morphin acetate	0	2	5	5	5
n/100 morphin valerianate	5	40	90	98	100
n/100 morphin ferrocyanate	5	60	90	100	100
n/100 morphin tartrate	10	80	95	100	100
n/100 morphin bromid	20	40	60	95	100
n/100 morphin sulphate	60	90	98	100	100
n/100 morphin phthalate	80	95	99	100	100
n/100 morphin meconate	90	95	99	99	100

Table 5 presents some striking results Paramecia were killed almost instantly when they were put into a solution of an N/50 concentration of strychnin valerianate, but lived for a period of twelve minutes in the same concentration of a solution of strychnin hyposulphite The other salts of this alkaloid in solutions of the same concentration, when their relative toxicity for paramecia is considered, fall in between the two mentioned A reference to the table reveals the position of each salt. In the N/100 concentration, the salts remain in the same order, and the only variations noted are that each requires a little longer time to produce the death of the organism Strychnin iodide in N/200 concentration is fatal to the paramecia in three minutes, while strychnin salicylate, in the same concentration, is fatal in seventy seconds

TABLE 5

Solutions Used.	Number of Seconds Paramecia Lived in Concentration of	
	N/50	N/100
Strychnin valerianate	5 sec.	
Strychnin acetate	5 sec.	30 sec.
Strychnin nitrate	45 sec.	60 sec.
Strychnin chlorid	65 sec.	80 sec.
Strychnin sulphate	70 sec.	120 sec.
Strychnin bromid	75 sec.	150 sec.
Strychnin arsenate	90 sec.	300 sec.
Strychnin glycerophosphate	110 sec.	480 sec.
Strychnin phosphate	140 sec.	900 sec.
Strychnin citrate	180 sec.	1200 sec.
Strychnin hypophosphite	720 sec.	

Table 6 shows there is a wide variation in the toxicity of certain quinin salts, as, for instance, the salicylate and the dibromid The former acts twenty-four and a half times (figures taken from column No 3) as rapidly as the latter The other salts experimented with fall in between these two extremes. The first, second and fourth columns, each representing experiments with paramecia from different cultures and at different times, show slight variations in the relative toxicity of certain salts, but there are no very wide discrepancies

The changes induced in the paramecia by the alkaloidal salts are characteristic The organisms which normally are oblong, soon after being put into the solution of a rapidly acting chemical, become nearly round or spherical The protoplasm becomes coarsely granular and its refractive power for light is consequently increased in some places and decreased in others This change simulates very closely the one produced in the same organisms when they are deprived of oxygen, as observed by Loeb and Hardesty,[4] and Budgett.[5] These

[4] Loeb and Hardesty Archiv f d. ges. Physiol., lxi 1895, p. 583

[5] Budgett Am. Jour of Phys. vol. i, 1898, p 210

changes come on quickly or slowly after introduction of the paramecia into the solutions, depending on whether the chemical killed the animalcule quickly or after a considerable period

TABLE 6

Solutions Used	Time Paramecia Lived in Concentrations			
	N/100 Sec	N/200 Sec	N/1000 Min	N/1000 Min
Quinin salicylate			8	
Quinin citrate			9	
Quinin valerianate	10	10	14	2
Quinin sulphate		30	16	1
Quinin ferrocyanid			16	
Quinin iodid	30	45	19	2 5
Quinin lactate	30	37	20	4
Quinin phosphate		90	20	10
Quinin acetate		30	22	2
Quinin chlorid	30	30	23	2
Quinin bromid	13	10	23	2
Quinin hypophosphite	30	15	24	8
Quinin arsenate		45	35	1
Quinin sulphochlorid	120	180	82	23
Quinin dichlorid	10	10	87	30
Quinin ditartrate		450	97	32
Quinin sulphophenylate	150	540	105	32
Quinin disulphate	120	330	125	25
Quinin dibromid		120	190	33

It was a rather interesting fact that the paramecia of the same cultures and of different cultures varied considerably in their degree of susceptibility to any one solution This is shown by the third and fourth columns of Table 6 In one instance an N/1000 solution of quinin sulphate killed the organisms in one minute, while in the case of paramecia from another culture sixteen minutes were required to destroy them

The variations noted among the individuals of one culture were especially marked in case of those solutions which required a considerable period to produce their complete toxic effects In those solutions which acted rapidly the variations in susceptibility of the organisms were scarcely noticed at all For this reason those alkaloids whose salts were usually very soluble were used in fairly concentrated solutions Many of the salts of quinin, however, are only slightly soluble

EXPLANATION AND DISCUSSION OF THE RESULTS

On first thought it might seem possible that the results are due to an error in making up the solutions, since such very small amounts of an alkaloid exist in a few c c of even the more concentrated solutions used The solutions were all made, however with great care The fact that there are much wider variations in toxicity between solutions of two salts of the same concentration than there are between two widely different concentrations of one alkaloidal salt is conclusive evidence that the results are in no great measure due to any error in the making up of the solutions For example, a N/100 solution of strychnin acetate is fatal to the paramecia in five seconds, while a N/100 solution of strychnin citrate kills the organisms in three minutes and a N/200 solution of strychnin acetate requires only thirty seconds to produce the death of the organism The latter solution contains just half the amount of the pure alkaloid in either of the two former and yet it kills the paramecia in one-sixth the time required by the strychnin citrate

This is also noticed with many of the other solutions That the reaction of the solutions is not accountable for the result was shown in the case of the quinin salts, where very careful tests of the reaction were made Solutions of the other alkaloidal salts are practically neutral The double salts of quinin are neutral, and yet considerable variation in the action of these salts is found Most of the other salts of quinin are very slightly alkaline, and each has practically the same amount of alkalinity Distinct variations in the toxicity of these salts is also observed It is an interesting fact that the double salts of quinin are less toxic for paramecia than the others This is noticed by referring to Table 6

By a comparison of Tables 1 to 6, inclusive, some interesting relationships are revealed For instance, sodium valerianate stimulates the splitting of hydrogen dioxid into water and oxygen by kidney extract very markedly, strychnin valerianate also has a decidedly accelerating action on the hydrolysis None of the caffein salts increase the amount of oxygen given off from the peroxid of hydrogen but caffein valerianate allows more than any other salt. The valerianates of quinin and strychnin are the most toxic of the salts of these alkaloids for paramecia The acetate is found in each instance close to the valerianate Strange to say, the valerianate and acetate of morphin, instead of being the most toxic of any of the salts, as is the case with strychnin and quinin, are the least toxic of the salts employed The citrate stands close to the acetate and valerianate in every case except the strychnin citrate when used on paramecia In this instance, instead of being very toxic, as would be inferred from its effects on the catalysis it is one of the least toxic of the strychnin salts The citrate of morphin was not worked with Very likely other analogies would have occurred had the salts of the same acids been used in each instance Further experiments must be done along this line with an idea of the comparisons

SUMMARY AND CONCLUSIONS

The acid with which certain alkaloids, strychnin, quinin and morphin, are combined alter decidedly the pharmacologic action of the alkaloid—at least in regard to their toxicity for paramecia

The most toxic salts of strychnin and quinin are in some instances at least those which stimulate catalytic processes the most markedly The salts of morphin with the smallest degree of toxicity in some instances at least, are the salts of those acids, the sodium salts of which stimulate the catalysis the most markedly

NOSTRUMS AND PROPRIETARIES VS U S PHARMACOPEIA AND NATIONAL FORMULARY PREPARATIONS *

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The title assigned to this article implies a contest or a trying, not, as I understand it, a test of the relative merits or values of the several classes of medicines, enumerated from a pharmacologic, pharmaceutic or even a therapeutic standpoint, but a test of their respective merits or values rated by their effects on the progress, utility and characters of medicines and pharmacy

That proprietary medicines some of them veritable nostrums are in active competition with regularly authorized and open formula preparations for the patronage of physicians is abundantly proven by the oft appearing detail man by the prodigious amount of mail received by physicians and by the teeming advertising pages of medical journals

* Read at a joint meeting of the Section on Clinical Medicine and Surgery of the Baltimore City Medical Society and Baltimore Branch of the American Pharmaceutical Association Nov 16 1906

That these same proprietary and often times secret formula preparations have already won considerable favor with physicians is unmistakably shown by the figures presented here to-night, by frequently appearing statistics of a similar character and by the personal knowledge of all concerned

USE OF PROPRIETARIES BY PHYSICIANS

The use of proprietaries by physicians is not altogether new, fifty or sixty years ago it had hardly begun, but its gradual, rather rapid increase is shown by the results obtained from an examination of 1,000 prescriptions in 1859, 1,000 in 1879 and the same numbers in 1899 and 1905, respectively The percentages of proprietaries presented in these different periods were, in order, 1 per cent (1 in 1,000), 8 per cent, 18 per cent and 21 per cent As tabulated, these figures represent such products only as have no really legitimate excuse for existing and do not include prescriptions for definite chemicals, although such may have had restricted ownership The figures may be advantageously used as a means of comparison, because, fortunately, they were compiled, consistently, by one person and because they came from the same location, where were the same class of physicians and patients throughout all the different periods, periods previous to the agitation, lately prevailing and still active An examination of two series of 500 consecutive prescriptions showed 21 per cent of proprietaries in 1905 and 18 per cent in 1906, a decrease of 3 per cent It seems only fair to state that in these 18 prescriptions in a hundred, proprietaries did not always appear alone, but in a large number of cases were in combination or were used as vehicles (elixir of lactopeptin and Fairchild's essence of pepsin with other proprietaries of the same nature taking the lead) The frequent use of proprietaries, as vehicles, pure and simple, is significant and should make its impress on those in charge of the revision of the Pharmacopeia and the Formulary

The reliability and consistent relationship of these figures is interestingly confirmed by an examination of the same numbers of consecutive prescriptions written in 1904 on the files of another store, located several blocks away, where different customers and many different physicians were concerned Here, it appears, about the same percentage of proprietaries was used, 19 per cent, and about the same conditions regarding combinations and vehicles prevailed, but the percentage of physicians not using proprietaries, at all, was larger, 72 per cent, as compared with 57 per cent and 64 per cent, respectively in 1905 and 1906 at the other pharmacy It may be interesting to learn that 125, 115 and 107 were the respective numbers of different physicians writing the several series of 500 each

OBJECTIONS TO PPOPRIETARIES

At this point it may be very properly asked What are the real objections to proprietaries, secret formula products after all? There is really no great objection to them *per se*, if no better knowledge of medicines than is had of them is required, or if something better is not desired Indirectly, however, they are very objectionable, possibly most objectionable because they are, verily, in direct opposition to the liberal and benevolent principles on which true medicine and true pharmacy are based because they are in direct opposition to real science and to truth itself, making whatever error that follows such objections a natural consequence, their use encourages or falsely rewards pretense and makes a market for wrongly or dishonestly appropriated current knowledge, their use affords no encouragement to true and advanced pharmacologic and therapeutic attainments and certainly makes impossible that often very desirable and special adjusting of remedy and dosage, that is reasonably consistent with the extremely precise methods employed in all other departments of medical and surgical practice

The development of science has, as is well known, in a number of instances, proven the worth or falsity of prevailing empiric practices, and so the very latest developments may prove, with startling exactness, just why some private empirical compounds have been efficacious in many cases and strangely disastrous in others This, it is ventured, will be found due to the presence of the supposedly secondary and what has heretofore been considered a mere pharmaceutic agent, which in Pharmacopeia and National Formulary preparations is known and may be reckoned with But who will be able to estimate the action of the hidden agent in proprietaries, which often times is the very "trick" on which depends their commercial value It is open to every physician to know that ammonium acetate in large excess and ammonium chlorid in considerable quantity are constituents of the well-known Basham's mixture And who is prepared to say just now that the effect of ammonium chlorid on blood coagulation is entirely different from the effect of calcium chlorid? Yet, certain we are that ammonium chlorid is present. Few physicians, however, know that the most popular proprietaries, supposed to contain a combination of peptone or albumin with iron and manganese, also contain large quantities of citrates, quantities often much in excess of an amount actually needed to keep the so-called peptonate of iron in solution The citrate, either of ammonium, potassium or sodium, is used, the agency of either one of these is necessary to preserve the combination of iron and peptone in solution and, seemingly, the smallest quantity of sodium citrate that is efficient is not less than 7 5 grains per fluid ounce When it is remembered that much larger quantities are used in some of these proprietaries and that an ounce is directed to be taken at a dose, it can be readily seen that the effects of these alkaline citrates must be thought of, especially in view of their effect on blood coagulation It may be further stated that when these citrates are not used, hydrochloric acid is employed and necessarily breaks up the organic combination and forms a simple solution of iron chlorid, mixed with a solution of peptone The official elixir of iron, quinin and strychnin phosphates presents these agents as true phosphates held in solution by the presence of the secondary or pharmaceutic agents, sodium citrate and ammonium acetate but no medical man has been informed that some of the private formulas, for proprietary elixirs of the phosphate of iron, quinin and strychnin produce, as has been repeatedly proven, elixirs of the chlorids of these substances The National Formulary elixir of pepsin, bismuth and strychnin presents these remedies in the logical, slightly acid form, while the examination of private formula, proprietary elixirs of this kind often discloses the fact that the bismuth is held in solution through an excess of alkali at the expense of pepsin and with the possibility of it precipitating the alkaloid strychnin

Recent publications by the Council on Pharmacy and Chemistry of the American Medical Association make confirmatory and often times surprising revelations and it appears that even though a manufacturer of unfor-

tunate compounds may by intention be honest he is frequently mistaken, badly mistaken, not only in the pharmacology of his product but in its chemistry as well, as these same publications, to be charitable, make it plain that many of the proprietaries offered must be both owned and promoted by the veriest laymen, since these in their unfortunate and unbecoming ignorance use strictly chemical terms and graphic chemical formulas to describe a simple mixture "Horrible examples" of the personnel of proprietary ownership and exploitation would be a show that would, in misfits and *mesalliances*, rival "the greatest on earth"

Uncertainty, unreliability, pretended originality and false claims of unusual potentiality are the really hurtful, harmful objections to these proprietary medicines which, because of these very characteristics, become veritable nostrums The objections, from an ethical or professional point of view, so well known to all of us, while not, perhaps, directly destructive, are far reaching in their retarding effects on the advancement of pharmaceutic practice and on the integrity of pharmacists Few men among us seem able to resist their seductive influences which so often tend and lead toward quackery

I have in my possession two advertisements directed to the laity in lay publications, one that of a New York pharmacist of unusual scientific attainment and at one time the chief exponent of ethical pharmacy in the metropolis, the other that of a Baltimorean, a former retail pharmacist Both take their products, originally presented to physicians for their sole use, directly to the laity and claim for their products the endorsement and patronage of physicians Apparently, forgetting there ever existed anything like ethics and yet, knowing them as I do, I believe they were perfectly sincere and honest when they first presented their products to the medical profession I believe the promoters of the hybrid-named, antagonist to pain proprietary which has now become a "family remedy" advertised to the laity were as sincere and as honest in the beginning None of these would have been tempted by Pharmacopeia preparations, none could have gone to the laity with National Formulary products, and yet those demoralizing products are not one whit better than these

The unfortunate, detracting associations which these proprietaries and many times nostrums make for medicine and medical men, are neither edifying nor helpful Look in the display windows or over the advertising lists of dealers in quack remedies and "patent medicines" and you will be unable to differentiate between the rankest of these and the proprietaries, regularly prescribed by many of our most reputable physicians Your "favorite" proprietary prescription is often seen standing close beside Dr Pierce's Favorite Prescription, with old mother Pinkham and Peruna's handsome belle doing the honors to both with equal deference. It is not in such company, it is our proud pleasure to note, that we find chaste and fair maidens, the inevitable offspring of our most creditable national standards

IGNORANCE, INDOLENCE AND LUST

While regarding medicine with reverent respect, may it not be said that even it suffers much from such associations and may it not appear that because the mother's or mistress' skirts have been touched at all the daughter's or the handmaiden's may have become sensibly soiled The most hopeful moralist must be he who, in his philosophy, reduces the initial causes of evil to the smallest possible number And he who believes all can be traced to three, ignorance, indolence and lust, sees promise in the possibility of lessening any of the three

In this instance it may be polite to modify the terms and say that it was ambition, not lust, that has led all sorts and conditions of men to present to physicians for their patronage the multitude of proprietaries and nostrums now afflicting us, that it was want of thought and lack of special training, not ignorance, that made it possible for the exploiter to have his extravagant claims accepted and his impossible promises credited, that it was the physician's lack of time and love for facility, not indolence, that has led him to use ready-made and easily ordered proprietaries

And on this same occasion and for the same polite reason it may be well to say that it was want of interest and lack of opportunity to equip himself, not ignorance, that prevented the average pharmacist from being able to impress physicians with his ability to meet their pharmaceutic needs in an up-to-date manner and equal to the promoter of proprietaries, it was love of ease and fear of exhaustion, not indolence, that has kept the pharmacist from selling official and semi-official products in competition with proprietaries

It matters but little under what head of human weakness we may classify the causes already enumerated, in any event, they must be charged to individual shortcomings, from a higher viewpoint, inexcusable and as requiring individual correction There are, however, other causes for present conditions for which, it may be said, individuals are not responsible, but which must be laid at the doors of organization, association and education an insufficient number of official, acceptable and efficient vehicles, the insufficient teaching of materia medica and pharmaceutical chemistry in medical schools, the sacrifice of true pharmaceutical discussions and demonstrations to purely commercial questions in pharmaceutical societies, the lack of a distinct understanding between the manufacturer and his legitimate distributor, the retailer, whereby the scope of each might be defined and the beneficial possibilities of each might be furthered, a lack of general and enthusiastic interest in the construction of the two standards, followed by a want of familiarity with their contents by all concerned, the slow revision and publication of the Pharmacopeia and the Formulary, the lack of frequent supplemental publications of corrections, improvements and additions These are some of the causes with which we must reckon in our several guilds and institutions of learning

In this land of the free and of great personal liberty we may not hope to accomplish so much as has been done in Europe by the hard hand of the law except from its educational power, but here it is from the kindlier offices of affiliation and fraternity, of encouragement and helpfulness from the stronger to the weaker, that we must look for betterment and for final salvation

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Water Supply of Damascus—The *Lancet* states that the water supply of the city of Damascus Turkey is very unsatisfactory The city is provided with water from a distant source, which, before it arrives for distribution at Damascus, runs through plains valleys and villages and in its course becomes contaminated by many and various impurities In the city itself, the water receives many new impurities in passing from house to house, and this explains the prevalence of typhoid in the city It is now intended to [illegible] gerous state of affairs Water from the [illegible] used as that is perfectly pure, but a [illegible] will be provided and other general [illegible] contamination impossible

THE MODERN SURGEON HIS BENEFICENT AND EVER-EXPANDING WORK

SHELBY CHADWICK CARSON, A.M, M.D
GREENSBORO, ALA.

I have selected the descriptive term "beneficent" not so much in contradistinction to a class of work that might be considered ill advised, rash or meddlesome nor as an insinuation that improper motives occasionally sway the actions of members of the profession, but because I have been impressed by the happy results of surgical intervention as a life-saving measure, while, on the other hand, I have witnessed the direst disaster following the failure to resort to it The opinion prevalent among the laity that a surgeon delights in the opportunity "to cut and to slash," as they express it, is not justified by the facts

The last ten years have wrought a considerable revolution in this respect, since the doctrine of conservatism has been extensively preached One can judge how radical this change is by the tone of many of the prominent articles in the late periodicals and the transactions of well-recognized medical associations Take, for instance, the discussion at the meeting of the American Gynecological Society, last May, by such well-known specialists as Baldy, Goffe and others on the subject, "Is Gynecology Dead?" whereas previously the suspicion of overdone work, if any existed, was directed to this particular field Then the general surgeon was justly jealous of the encroachments on his domain by the gynecologist

My many years of uninterrupted devotion to the profession have begotten an abiding faith in its high purposes and aims, so that any rare instance of unnecessary interference on the part of the surgeon I class as one of those unfortunate events incident to all great movements

While each separate branch of medicine has its attractions, and, therefore, its votaries and its advocates, the science of surgery ranks second to none, if, indeed, it does not have priority over all cognate departments Its results are usually so prompt and ofttimes even brilliant that it is highly gratifying to the earnest surgeon and eminently satisfactory to the patient While the internist must often wait and hope for results, the surgeon strives and brings them to pass The most marvelous transformations in the appearance and well-being of any individuals that I can now call to mind have occurred in those desperate "stomach cases," in which a wan, emaciated, miserable individual, apparently on the verge of dissolution, on the third day after a gastroenterostomy will have an expression of contentment and happiness that will do any one good to see

Surgery is both a science and an art Only a few weeks ago some writer said that probably this art had reached its zenith About eight years ago I ventured the same opinion in a paper prepared for the Mississippi Valley Medical Association, saying "The art of surgery, the manipulative skill, the operative faculty, has probably reached its summit," but since then I have had the good fortune to see the leading surgeons in both Europe and America at work, and I feel sure they are even more adroit and expert than at the time I wrote I have also had the opportunity of comparing two of our leading surgeons with themselves for two consecutive years, and I am convinced that there has been an improvement even in their operative skill

But the science of surgery is practically without limit Possibly the next decade may open up another avenue of progress equal in importance to the period which evolved and almost perfected asepsis and antisepsis

If any one accomplishment in surgery can be rated above another it is the ability to make a diagnosis both early and accurately The importance of diagnosis can not be overestimated So often, when a case is brought to him, the specialist is hampered by the advanced stage of the disease, owing to a failure on the part of some one to recognize the gravity of the situation It should be the ambition of every physician to excel in this line, but this condition will be attained only by study and experience The constant and habitual exercise of the sense of touch, especially as regards the internal organs —the dexterity in palpating and auscultating—should engage the earnest attention of all One afternoon, in St Peter's, I expressed to Hurry Fenwick my surprise at the readiness with which he made the diagnosis of diseased kidney It was before the attention of the profession had been drawn so specifically to that region His reply, "Why, only a little practice makes it easy," encouraged me to form a habit when going over a patient —even though I suspect nothing—to investigate carefully this particular organ merely to retain the "touch" that practice has enabled me to acquire These early diagnoses do not simply redound to one's own credit and the good of the patient, but they greatly enhance the value of surgery generally I am not prepared to go to such an extreme as to state that an exploratory incision for the sake of diagnosis is a reproach to a surgeon, because it is well known that even the most skilful can not tell exactly what he will find within the abdomen, but it is evident that each year makes it more akin to a reproach

At first the surgeon had only a knowledge of gross anatomy, but finally this knowledge led "to the unfolding of minute anatomy and pathologic anatomy On this foundation was erected the splendid structure of surgical pathology and bacteriology Previous to this time surgery, like law, was taught and practiced largely by precedent. Surgical pathology and bacteriology transformed the old anatomic surgery Along the line of pathologic physiology the next great advances in surgery will probably be made"

Surgical education in these days of progress is not complete without an extensive knowledge of practical pathology and surgical physiology as pertaining to glandular and lymphatic action This fact is made more and more conspicuous in the principal clinics in the large centers The simple fact that the small intestine carries only liquid stools and that the large bowel is the drying house, as it were, of the alimentary tract has already suggested some recent theories in the treatment of surgical diseases of the abdomen Ochsner's brilliant results in appendicitis by keeping food out of the stomach and feeding by rectum led to special investigation and research by other observers and it was decided that when full or even partly filled the small bowel immediately begins its excursions to and fro within the abdominal cavity — its vermicular movements — and thereby scatters infection broadcast, that when empty it is quiet and, therefore, not an element of danger Surgery quickly takes advantage of this in that after an operation it advises covering the field carefully with omentum as a protection against the migratory movement of the small intestines, or to utilize some fixed portion of the large bowel—the sigmoid for instance—as a safeguard by placing it against the stump or field of operation It is well when operating in the abdomen to take into consideration the facts that "granular mat-

ter and coarse débris are absorbed only through the lymph spaces at the diaphragm, while the fluids are rapidly absorbed by the peritoneum, that there are three cavities of the peritoneum to be drained, viz the right and left flanks separated from each other by the spinal column and the pelvis separated from the flanks by the psoas muscle Either flank holds more fluid and is an inch deeper than the pelvis The body must be elevated to an angle of sixty or seventy degrees to drain properly by Fowler's position The entire cavity can be drained by gravity by a lateral position"

The surgeon is forced to a thorough study and appreciation of the lymphatic system and the manner that infection travels through the glands One of the most practical discourses along this line that I ever heard was from a surgeon of note while he was engaged in extirpating a large thyroid in a case of exophthalmic goiter

In July I witnessed the fifty-second operation for goiter—probably one-half of them of the exophthalmic variety—that a noted surgeon had done since the beginning of the year It seems that a nicety of discrimination is required as to the amount of thyroid tissue that is left.

There is another line of surgical work—as yet in the experimental stage—which in my opinion is of doubtful utility It has some attractive as well as novel features I refer to the transplantation of tissues as well as organs—a line of work now being prosecuted mainly by Garre, Payr and Pankow A portion of a mother's thyroid has been successfully transplanted to the spleen of her child, and the kidney of a dog implanted into the neck of the same animal, while the renal artery has been united to the carotid, and the renal veins to the innominate veins without disturbing the renal function Robert T Morris has recently reported a successful case of ovarian grafting Strange to say osseous grafts give very gratifying results, and it is not at all improbable that bone grafting will play an important rôle hereafter in the surgery of the extremities

Page claimed that physical diagnosis is the "mathematics" of medicine, but when one undertakes to define surgery or even to confine it to certain limits there is but little common ground on which to agree It is a less difficult task to enumerate some of the attributes of a surgeon which may prove germane to the subject. There are a few principles, however, that still hold good in this department, such for instance as "When in doubt, wait" The wisdom of this can scarcely be questioned when one has not the ready acumen to decide Another is "Never operate unless confronted by an actual necessity" I would not take issue with this so long as it relates to major surgery Minor operations are done every day when a positive necessity does not exist—under circumstances for instance, as influence the comfort of the patient or for cosmetic effect. Again "Save every particle of tissue possible" In order to emphasize this principle Wyeth of New York while examining an injured hand in a clinic remarked in an exceedingly positive manner "Surgery does not carry with it the idea 'to lop off' but rather 'to build up'" The thought struck me then that that is a very happy expression but recently—since my mind has been engaged in the preparation of this paper—a negro woman came into my office, having traveled in a buggy about twenty-five miles and volunteered the information that she had a "lump of some kind as big as her fist that hung from her privates" I at once thought of procidentia uteri or possibly an extruded uterine polyp, but imagine my surprise on finding an hypertrophied clitoris at least three inches in circumference at its origin, fully six inches long and ending in a bulbous-shaped mass about eight inches in circumference This entirely concealed the vaginal orifice and shut in its secretions. The meatus urinarius was also beneath the mass Consequently the odor was extremely disagreeable. As I threw a carbolized gauze around the tumor in order to examine it the better the thought went through my mind like a flash—if Wyeth were here now would he still say "Surgery does not carry with it the idea 'to lop off'?" It struck me that this thing certainly was sufficiently "built up" And thus it is when one attempts to lay down a rule for another in as broad a field as surgery

By the most imperative demands the surgeon of late days is forced to make incursions into the field of obstetrics And when it is wisely, skilfully and successfully done where else can the God-given power of man more pre-eminently manifest itself? I have never yet gained my consent to claim Cesarean section as entirely justifiable in placenta prævia and other anomalous conditions, but there is a rare dystocia in which Cesarean section offers the only avenue of escape for either the mother or the child I have in mind now an antepartum hour-glass contraction in which a band of fibers, not Bandl's so-called ring, fully an inch in width, as firm as metal, encircled without compressing the child's neck at its juncture with the shoulders No amount of anesthetic or efforts at manual dilatation would have any effect Formerly in such cases the woman perished undelivered

Whereas surgery, like law, was once taught by precedent, now a broader and ever broadening knowledge lifts one above the restrictions that pertain to mere work on gross anatomy, and gives more license—a license that will not be abused by the conscientious man—to the judgment of the individual operator Surgeons are constantly having comparatively new problems to solve, facing rare conditions, for which there never has been a precedent, and what are they to do when so confronted? In my opinion, the conclusion of the whole matter is that a man of good judgment and discretion, possessing a sensitive conscience and governed by a high sense of moral rectitude, being thoroughly grounded in the present teachings of surgical science, has a right to blaze out a path for himself whenever the occasion arises After all, in the final analysis the chief elements in good surgery are simplicity and common sense

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CLINICAL OBSERVATIONS ON BLOOD PRESSURE IN ARTERIOSCLEROSIS AND BRIGHT'S DISEASE

WITH SUGGESTIONS CONCERNING THE THERAPEUTIC CONTROL OF PERSISTENT HIGH BLOOD PRESSURE *

ARTHUR R ELLIOTT M D
Professor of Medicine Post Graduate Medical School and Hospital
CHICAGO

The average systolic blood pressure is usually understood to be about 115 mm of mercury when the estimation is made with a wide arm-band It is practically impossible to fix an invariable standard for any physiologic phenomenon In common with other physical processes, such as body temperature respiration, urine excretion, etc, which are influenced by many conditions of every-

* Read before the Chicago Medical Society Nov 28 1905

THE MODERN SURGEON HIS BENEFICENT AND EVER-EXPANDING WORK.

SHELBY CHADWICK CARSON, A.M., M D
GREENSBORO, ALA

I have selected the descriptive term "beneficent" not so much in contradistinction to a class of work that might be considered ill advised, rash or meddlesome nor as an insinuation that improper motives occasionally sway the actions of members of the profession, but because I have been impressed by the happy results of surgical intervention as a life-saving measure, while, on the other hand, I have witnessed the direst disaster following the failure to resort to it The opinion prevalent among the laity that a surgeon delights in the opportunity "to cut and to slash," as they express it, is not justified by the facts

The last ten years have wrought a considerable revolution in this respect, since the doctrine of conservatism has been extensively preached One can judge how radical this change is by the tone of many of the prominent articles in the late periodicals and the transactions of well-recognized medical associations Take, for instance, the discussion at the meeting of the American Gynecological Society, last May, by such well-known specialists as Baldy, Goffe and others on the subject, "Gynecology Dead?" whereas previously the suspicion [illegible]erdone work, if any existed, was directed to this par[illegible]r field Then the general surgeon was justly jealous of the encroachments on his domain by the gynecolo[illegible]t

My many years of uninterrupted devotion to the profession have begotten an abiding faith in its high purposes and aims, so that any rare instance of unnecessary interference on the part of the surgeon I class as one of those unfortunate events incident to all great movements

While each separate branch of medicine has its attractions, and, therefore, its votaries and its advocates, the science of surgery ranks second to none, if, indeed, it does not have priority over all cognate departments Its results are usually so prompt and ofttimes even brilliant that it is highly gratifying to the earnest surgeon and eminently satisfactory to the patient While the internist must often wait and hope for results, the surgeon strives and brings them to pass The most marvelous transformations in the appearance and well-being of any individuals that I can now call to mind have occurred in those desperate "stomach cases," in which a wan, emaciated, miserable individual, apparently on the verge of dissolution, on the third day after a gastroenterostomy will have an expression of contentment and happiness that will do any one good to see

Surgery is both a science and an art Only a few weeks ago some writer said that probably this art had reached its zenith About eight years ago I ventured the same opinion in a paper prepared for the Mississippi Valley Medical Association, saying "The art of surgery, the manipulative skill, the operative faculty, has probably reached its summit," but since then I have had the good fortune to see the leading surgeons in both Europe and America at work, and I feel sure they are even more adroit and expert than at the time I wrote I have also had the opportunity of comparing two of our leading surgeons with themselves for two consecutive years, and I am convinced that there has been an improvement even in their operative skill

But the science of surgery is practically without limit Possibly the next decade may open up another avenue of progress equal in importance to the period which evolved and almost perfected asepsis and antisepsis

If any one accomplishment in surgery can be rated above another it is the ability to make a diagnosis both early and accurately The importance of diagnosis can not be overestimated So often, when a case is brought to him, the specialist is hampered by the advanced stage of the disease, owing to a failure on the part of some one to recognize the gravity of the situation It should be the ambition of every physician to excel in this line, but this condition will be attained only by study and experience The constant and habitual exercise of the sense of touch, especially as regards the internal organs —the dexterity in palpating and auscultating—should engage the earnest attention of all One afternoon, in St Peter's, I expressed to Hurry Fenwick my surprise at the readiness with which he made the diagnosis of diseased kidney It was before the attention of the profession had been drawn so specifically to that region His reply, "Why, only a little practice makes it easy," encouraged me to form a habit when going over a patient —even though I suspect nothing—to investigate carefully this particular organ merely to retain the "touch" that practice has enabled me to acquire These early diagnoses do not simply redound to one's own credit and the good of the patient, but they greatly enhance the value of surgery generally I am not prepared to go to such an extreme as to state that an exploratory incision for the sake of diagnosis is a reproach to a surgeon, because it is well known that even the most skilful can not tell exactly what he will find within the abdomen, but it is evident that each year makes it more akin to a reproach

At first the surgeon had only a knowledge of gross anatomy, but finally this knowledge led "to the unfolding of minute anatomy and pathologic anatomy On this foundation was erected the splendid structure of surgical pathology and bacteriology Previous to this time surgery, like law, was taught and practiced largely by precedent. Surgical pathology and bacteriology transformed the old anatomic surgery Along the line of pathologic physiology the next great advances in surgery will probably be made"

Surgical education in these days of progress is not complete without an extensive knowledge of practical pathology and surgical physiology as pertaining to glandular and lymphatic action This fact is made more and more conspicuous in the principal clinics in the large centers The simple fact that the small intestine carries only liquid stools and that the large bowel is the drying house, as it were, of the alimentary tract has already suggested some recent theories in the treatment of surgical diseases of the abdomen Ochsner's brilliant results in appendicitis by keeping food out of the stomach and feeding by rectum led to special investigation and research by other observers and it was decided that when full or even partly filled the small bowel immediately begins its excursions to and fro within the abdominal cavity — its vermicular movements — and thereby scatters infection broadcast, that when empty it is quiet and, therefore, not an element of danger Surgery quickly takes advantage of this in that after an operation it advises covering the field carefully with omentum as a protection against the migratory movement of the small intestines, or to utilize some fixed portion of the large bowel—the sigmoid for instance—as a safeguard by placing it against the stump or field of operation It is well when operating in the abdomen to take into consideration the facts that "granular mat-

ter and coarse débris are absorbed only through the lymph spaces at the diaphragm, while the fluids are rapidly absorbed by the peritoneum, that there are three cavities of the peritoneum to be drained, viz the right and left flanks separated from each other by the spinal column and the pelvis separated from the flanks by the psoas muscle Either flank holds more fluid and is an inch deeper than the pelvis The body must be elevated to an angle of sixty or seventy degrees to drain properly by Fowler's position The entire cavity can be drained by gravity by a lateral position"

The surgeon is forced to a thorough study and appreciation of the lymphatic system and the manner that infection travels through the glands One of the most practical discourses along this line that I ever heard was from a surgeon of note while he was engaged in extirpating a large thyroid in a case of exophthalmic goiter

In July I witnessed the fifty-second operation for goiter—probably one-half of them of the exophthalmic variety—that a noted surgeon had done since the beginning of the year It seems that a nicety of discrimination is required as to the amount of thyroid tissue that is left.

There is another line of surgical work—as yet in the experimental stage—which in my opinion is of doubtful utility It has some attractive as well as novel features I refer to the transplantation of tissues as well as organs—a line of work now being prosecuted mainly by Garre, Payr and Pankow A portion of a mother's thyroid has been successfully transplanted to the spleen of her child, and the kidney of a dog implanted into the neck of the same animal, while the renal artery has been united to the carotid, and the renal veins to the innominate veins without disturbing the renal function. Robert T Morris has recently reported a successful case of ovarian grafting Strange to say osseous grafts give very gratifying results, and it is not at all improbable that bone grafting will play an important rôle hereafter in the surgery of the extremities

Page claimed that physical diagnosis is the "mathematics" of medicine, but when one undertakes to define surgery or even to confine it to certain limits there is but little common ground on which to agree It is a less difficult task to enumerate some of the attributes of a surgeon which may prove germane to the subject. There are a few principles, however, that still hold good in this department, such for instance as "When in doubt, wait" The wisdom of this can scarcely be questioned when one has not the ready acumen to decide Another is "Never operate unless confronted by an actual necessity" I would not take issue with this so long as it relates to major surgery Minor operations are done every day when a positive necessity does not exist—under circumstances for instance, as influence the comfort of the patient or for cosmetic effect. Again "Save every particle of tissue possible" In order to emphasize this principle Wyeth of New York while examining an injured hand in a clinic, remarked in an exceedingly positive manner "Surgery does not carry with it the idea 'to lop off' but rather 'to build up'" The thought struck me then that that is a very happy expression but recently—since my mind has been engaged in the preparation of this paper—a negro woman came into my office, having traveled in a buggy about twenty-five miles and volunteered the information that she had a "lump of some kind as big as her fist that hung from her privates" I at once thought of procidentia uteri or possibly an extruded uterine polyp, but imagine my surprise on finding an hypertrophied clitoris at least three inches in circumference at its origin, fully six inches long and ending in a bulbous-shaped mass about eight inches in circumference. This entirely concealed the vaginal orifice and shut in its secretions. The meatus urinarius was also beneath the mass Consequently the odor was extremely disagreeable. As I threw a carbolized gauze around the tumor in order to examine it the better the thought went through my mind like a flash—if Wyeth were here now would he still say "Surgery does not carry with it the idea 'to lop off'?" It struck me that this thing certainly was sufficiently "built up" And thus it is when one attempts to lay down a rule for another in as broad a field as surgery

By the most imperative demands the surgeon of late days is forced to make incursions into the field of obstetrics And when it is wisely, skilfully and successfully done where else can the God-given power of man more pre-eminently manifest itself? I have never yet gained my consent to claim Cesarean section as entirely justifiable in placenta prævia and other anomalous conditions, but there is a rare dystocia in which Cesarean section offers the only avenue of escape for either the mother or the child I have in mind now an antepartum hourglass contraction in which a band of fibers, not Bandl's so-called ring, fully an inch in width, as firm as metal, encircled without compressing the child's neck at its juncture with the shoulders No amount of anesthetic or efforts at manual dilatation would have any effect Formerly in such cases the woman perished undelivered

Whereas surgery, like law, was once taught by precedent, now a broader and ever broadening knowledge lifts one above the restrictions that pertain to mere work on gross anatomy, and gives more license—a license that will not be abused by the conscientious man—to the judgment of the individual operator Surgeons are constantly having comparatively new problems to solve, facing rare conditions, for which there never has been a precedent, and what are they to do when so confronted? In my opinion, the conclusion of the whole matter is that a man of good judgment and discretion, possessing a sensitive conscience and governed by a high sense of moral rectitude being thoroughly grounded in the present teachings of surgical science has a right to blaze out a path for himself whenever the occasion arises After all, in the final analysis, the chief elements in good surgery are simplicity and common sense

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CLINICAL OBSERVATIONS ON BLOOD PRESSURE IN ARTERIOSCLEROSIS AND BRIGHT'S DISEASE

WITH SUGGESTIONS CONCERNING THE THERAPEUTIC CONTROL OF PERSISTENT HIGH BLOOD PRESSURE *

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The average systolic blood pressure is usually understood to be about 115 mm of mercury when the estimation is made with a wide arm-band It is practically impossible to fix an invariable standard for any physiologic phenomenon In common with other physical processes, such as body temperature, respiration urine excretion, etc, which are influenced by many conditions of every-

* Read before the Chicago Medical Society Nov 28 1906.

day life, we find the degree of blood pressure likewise affected by a great variety of circumstances producing comparatively wide but transient fluctuations, especially in the direction of increase, so that it is almost impossible to speak of normal values for blood pressure After making due allowance for these physiologic variations, experience would lead me to place the normal average limits of systolic blood pressure at from 105 mm to 140 mm Any persistent elevation above the latter figure may be interpreted as constituting hypertension

Essential hypertension is a condition, which, if once permanently established and pronounced, becomes a factor of great importance to the welfare of the individual, inasmuch as it entails a lasting increase in circulatory resistance, with consecutive structural changes in the heart wall and degenerative defects in the arteries themselves

FIRST SERIES

The reports of blood pressure observations submitted herewith, concern only the variations in systolic blood pressure in certain cases of arteriosclerosis and chronic renal disease which have been under routine observations for considerable although variable periods of time The blood pressure gauges used were Cook's modification of the Riva Rocci instrument with a 9 cm arm-band, and the sphygmomanometer of Stanton As nearly as possible exact conditions were duplicated at each application of the instrument Physical repose and mental tranquillity were as far as possible secured The great majority f the observations were taken with the patient in the ting position, a comparatively few in the recumbent osition

I have had under observation during the past twelve months thirty cases of arteriosclerosis Without exception these patients have sought relief from some functional or organic manifestation of the disease Nine had prostatic hypertrophy, one cerebral thrombosis, one retinal hemorrhages, three choroiditis with visual defects, one angina pectoris, and a number have complained of dyspnea, precordial discomfort and cardiac irregularity

In this series the average age was sixty-one years, and the average maximum systolic blood pressure 148 mm In fourteen of the cases (47 per cent) the blood pressure fell within the normal range Sixteen cases (53 per cent) displayed a systolic pressure persistently above the normal limit Only six of the entire series (20 per cent) showed a blood pressure which could be called significant—a positive hypertension In brief, these six cases are as follows

CASE 1 —Male, aged 81, has "pipe stem" arteries, dyspnea, chronic cough, cardiac hypertrophy, and a harsh basic systolic murmur The blood pressure was invariably above 200 mm , and on one occasion 225 mm The urine was rather scant and concentrated, and contained degenerative tube casts and albumin I am not at all sure that the renal condition is not the cause of this man's hypertension

CASE 2 —Male aged 76, colored, spare individual, preacher, marked calcification of all superficial arteries There is great dyspnea and slight malleolar edema Urine has a few casts, no albumin, maximum systolic pressure observed, 175 mm

CASE 3 —Male, aged 41, spare, no syphilis has attacks of anginoid character General fibrosis of palpable arteries, with indications of aortic atheroma Casts present, no albumin, maximum systolic blood pressure, 175 mm

CASE 4 —Female aged 79 nodular arteries, double senile cataract, chronic bronchitis, harsh basic cardiac murmur Urine normal except for casts Blood pressure 176 mm

CASE 5 —Male, aged 77, prostatic hypertrophy, harsh basal systolic murmur, clanging aortic second sound, cardiac hypertrophy, no albuminuria, blood pressure 170 mm

CASE 6 —Male, aged 53, weight 131 pounds, syphilitic, fibrotic tortuous arteries, cardiac enlargement, basal systolic murmur very reverberant second aortic sound, aortic dilatation, very dyspneic, no albuminuria, systolic blood pressure 200 mm

The number of cases of arteriosclerosis included in the foregoing observations is not large, but the series has the distinct advantage of being made up of typical cases, each individual coming under treatment for some manifestation of arterial disease A point of interest brought out by this investigation is the comparatively high percentage of cases (47 per cent) of arteriosclerosis, in which the blood pressure was below 140 mm , a normal limit which certainly can not be called excessive for a group of individuals averaging sixty-one years of age This result is confirmatory of the observations of Carter, Potain, Groedel, Dieschfeld and others It would appear that thickening and hardening of the superficial arteries on which we base the clinical diagnosis of arteriosclerosis does not constitute sufficient cause for development of high blood pressure We are not to conclude because the radial, temporal and other palpable arteries are sclerosed that high tension necessarily exists The sphygmomanometer is absolutely essential to clearing up this important point, and it should be invariably employed as a means of diagnosis in every case of arterial disease It is practically impossible for the unaided finger, no matter how skilled the observer may be in pulse reading, to determine with accuracy how much of the hardness and firmness of an artery is produced by high pressure of the blood within the vessel, and how much is due to thickening of the arterial wall

The paradoxical absence of cardiac hypertrophy in certain cases of well-marked and even advanced arteriosclerosis, is explained now that we realize that the essential element of high blood pressure may not be present in any given case, and that the degree of sclerosis of the superficial arteries is no reliable criterion, either of the severity of alterations in visceral blood vessels, or of the degree of tension present It is clear that some underlying factor not accessible to our present methods of investigation must be responsible for the occurrence of high blood pressure in arteriosclerosis What this determining cause is, we are not yet sufficiently advanced in the knowledge of our subject to say with certainty, although the researches of Hasenfeld and of Hirsch supply an interesting and probably correct explanation The contention of these authorities, strengthened by clinical and pathologic proofs, is that it is only when the vessels of the splanchnic area or of the aorta above the diaphragm are diseased that high blood pressure and cardiac hypertrophy develop in arteriosclerosis Degeneration of the peripheral vessels alone does not appear to exert this influence After all, this is no more than we might expect if we bear in mind the all-important regulatory position which the abdominal circulation bears to general systemic blood pressure It is interesting to note in connection with the foregoing that each one of the six cases of my series that displayed positive hypertension (170 mm or over) yielded the physical signs of atheroma of the aorta

It is hardly necessary to urge the importance of carefully excluding chronic nephritis in every case of arteriosclerosis with hypertension The frequency with which chronic renal disease is associated with cardiovascular changes is well known, and no factor is so potent as nephritis in the causation of high blood pressure If a diagnosis of chronic interstitial nephritis can be made, it is

not necessary to search further for the cause of high pressure At the same time, it is to be remembered that greater care than ordinary is required to diagnose nephritis in cases of arteriosclerosis, owing to the fact that some degree of renal atrophy is almost always present as a consequence of the kidneys sharing in the general vascular deterioration Casts are deprived of their diagnostic value since they are almost invariably present in the urine of the sclerotic individual The presence of albumin and the quantitative urinary findings are of much greater value

So far as I am aware, there exists no absolute clinical indication that will serve as a means of identifying cases of splanchnic sclerosis Fraenkel and Hasenfeld have pointed out that corpulent persons of a sedentary mode of life are especially prone to the development of sclerosis in the abdominal vessels, thin individuals being less liable to excessive blood pressure This observation seems to be borne out by clinical experience, yet it is manifestly impossible to establish corpulency and physical indolence as reliable criteria of the local distribution of retrograde vascular changes Ophthalmoscopic examination may be of service by enabling us to detect changes in the retinal vessels in cases where the superficial arteries are free from gross indications of the disease, and resort should be had to this aid to diagnosis in all doubtful cases

When the aorta above the diaphragm is seriously involved, the diagnosis is, as a rule, much easier Alterations of the basal systolic heart sound and a clanging, reverberant quality to the second sound in the aortic area, will frequently be revealed by careful auscultation

It is altogether likely that those rare and puzzling cases of cardiovascular disease with hypertension without commensurate involvement of the kidneys that come under observation may prove to be instances of splanchnic arteriosclerosis In concluding this brief consideration of arteriosclerosis we may be justified in drawing the following empirical deductions from the information in hand

DEDUCTIONS

1 The ordinary clinical type of arteriosclerosis is not necessarily accompanied by high blood pressure, a large percentage failing to show this development

2 When high blood pressure is met with in arteriosclerosis it points to the existence either of associated renal disease or sclerosis of the splanchnic vessels and of the aorta above the diaphragm—one or both

3 If we are able to exclude chronic interstitial nephritis in such a case, splanchnic or aortic sclerosis is to be suspected

SECOND SERIES

The second series of observations that I wish to report comprises sixty cases of chronic Bright's disease Only a resumé of the maximum records will be given, the full detail being reserved for a future communication

Number of cases investigated, 60—male 34, female, 26
Average age, 51 years
Average weight, 160 pounds
Average maximum systolic blood pressure, 190 mm.
Average minimum systolic blood pressure 165 mm
Maximum systolic blood pressure recorded in any case, 285 mm
Minimum systolic blood pressure recorded in any case, 110 mm

The high average pressure in this series constitutes a marked contrast to the average recorded in the preceding group of arteriosclerosis being 190 mm in nephritis against 148 mm in arteriosclerosis This furnishes proof, if proof were needed, of the almost essential position which renal disease occupies in the causation and maintenance of morbid hypertension The permanent character of this symptom in chronic nephritis, and the extreme difficulty of influencing it by treatment, is indicated by the high minimum systolic pressure recorded in this series (165 mm), despite a systematic effort to reduce it in almost every case by diet, hygiene and other therapeutic measures

An interesting outcome of my study of these cases is the evidence forthcoming as to the relation existing between albuminuria and high blood pressure.

1 Number of cases without demonstrable albuminuria, 8 Average maximum systolic pressure in these cases, 200 mm

2 Number of cases in which the albuminuria amounted to a trace only—too minute for accurate volumetric estimation, 29 Average maximum systolic pressure in these cases, 180 mm

3 Number of cases in which albumin was present in the urine in appreciable amount, 21 Average maximum systolic blood pressure in these cases, 197 mm

Average amount of albumin in volumetric p c, 3 76 per cent

Judging from these records it would appear that no constant ratio exists between the degree of blood pressure and the intensity of the albuminuria. In the foregoing series the highest average blood pressure was noted in cases without albuminuria

Another point of interest to determine is the relationship between the quantity of urine excreted and the degree of blood pressure Thirty-one cases were carefully observed in this regard, the urine being collected and measured in a routine way

Average maximum blood pressure in these cases, 180 mm
Average daily excretion of urine, 1,554 cc.

From this it would appear that high pressure is not necessarily attended by a marked increase in urine outflow Some detail of this observation is of sufficient interest to detain us a moment Thus, in a case with a pressure of 285 mm , the urine equaled only 1,000 c c , another with a pressure of 265 mm had a urine of 720 c c of urine On the other hand, a blood pressure of 255 mm with 1,280 c c of urine, one of 270 mm with 1,000 c c of urine On the other hand, a blood pressure of 255 mm has coincided with a polyuria of 5,740 c c , one of 210 mm with 2,400 c c of urine, one of 140 mm with 2,400 c c of urine, etc No fixed relation between arterial pressure and renal activity would appear from these statistics

Chronic Bright's disease is essentially a disease of systemic scope involving the arteries, and the heart as well as the kidneys Arterial hypertension is one of its salient features, a fact long known and now strikingly demonstrated by blood pressure readings with instruments of precision A systolic blood pressure of over 200 m m is exceedingly common and cases have been reported where it has attained the extreme degree of 300 mm The highest record I have observed using a 9 cm arm-band was 285 mm in a young woman with enormous cardiac hypertrophy, who died shortly after of circulatory failure and uremia Other high systolic pressures in my records in different cases are 270 mm 265 mm , 260 mm , 255 mm , and 235 mm Twenty-six of the series of sixty cases displayed systolic pressures of 200 mm and over

Cases do occur, however, which are not accompanied by hypertension Light instances o s char s are included in my series two of the l-
ary low blood pressure, where t
lated and was unable to sust

Notwithstanding these occasional exceptions, high blood pressure is so frequent and significant an accompaniment of contracted kidney that it constitutes one of the most valuable diagnostic indications of this disease. Urinary criteria are often obscure or may fail entirely, as we have been made aware by the researches of Emerson, Cabot and others. If the sphygmomanometer is used as a routine procedure in diagnosis, high blood pressures can not escape detection, and will put the observer on the alert. A systolic pressure of 200 mm. or thereabouts points with so clear a significance to the kidneys as to reduce to a minimum the possibility of these cases escaping proper interpretation.

THERAPEUTIC CONTROL

It now remains, in fulfilling the title of my paper, to discuss the question of the proper management of high pressure cases. In inviting your attention to this aspect of the subject, I have a specific purpose in view, viz., the consideration of the limitations of drug therapy in the control of hypertension. I regard it as important to raise this question at the present time, owing to the increasing tendency to the use and I believe the unwise use of vasodilators in Bright's disease and other high tension disorders. In order to obtain a clearer view of the subject, a brief resumé of the clinical facts of the situation will be of service. All high blood pressure conditions are essentially characterized by the element of systemic toxemia, indeed, high blood pressure is primarily no more than a vascular reaction against the presence of toxins in the circulating blood. In Bright's disease this vascular reaction is perpetuated by the continuous character of the toxemia, and is subsequently enhanced by the uremia which results from advancing renal inadequacy. This chronic vaso-constriction leads to fibrosis of the arterial walls and impairment of their elasticity, so that the work of the heart is increased and the organ hypertrophies. Tracing the matter to its termination, we find that the permanent and progressive character of the peripheral obstruction and the limited possibilities of the heart for adjustment ultimately lead to cardiac failure, the ventricles dilate and the support of the circulation being thus impaired, secondary low pressure becomes substituted for primary high blood pressure. Progressive cardiac failure is, in theory at least, inevitably in store for every such case of cardio-renal disease.

A very different aspect is revealed if we regard the matter from the physiologic standpoint. That the extensive structural involvement and functional crippling of the kidneys must necessarily be attended with enlarged powers of circulation is obvious, since diminished powers of excretion can be compensated for only by increase in the force of the blood current in the glomerular vessels. When we consider that the energy of the heart's contraction is mainly expended in overcoming the resistance presented by the arterial blood pressure, we can easily see why, in high tension cases, the heart hypertrophies. The entire cardiovascular sequence may be regarded as a reaction of the organism against morbid influences, and as such may be looked on, within certain limits, as conservative and compensatory.

Clinical emphasis of this fact is furnished by the greater comfort and activity enjoyed by the nephritic with high tension and cardiac hypertrophy than his less fortunate brother with whom such compensation through some inherent fault of vitality fails to become established. A still more striking contrast is constituted by the misery of the stage of secondary low tension as compared with the comparative vigor and good functional health of the period of high tension. After observing so impressive a transition one almost feels inclined to endorse the statement of Broadbent, that "it is not high tension but low tension that is to be feared in Bright's disease." Notwithstanding the truth of such an assertion in the ultimate sense, a doubt of its entire validity is forced on one by the realization that most of the functional disturbances and pains of Bright's disease arise in consequence of high tension. To this factor also may be traced most of the fatal developments which complicate its course, such as apoplexy, angina pectoris, and the dreaded terminal heart failure. A consideration of all the clinical facts must, it seems to me, impress the observer with a due sense of the value of high blood pressure to the renal invalid, yet modified with a large reservation of doubt engendered by the capacity of this element to work the ultimate undoing of the patient.

High blood pressure is a friend to the nephritic patient, but one that needs careful watching, otherwise it may betray him into many a pitfall. This is exactly the attitude, in my judgment, in which we should approach the problem of the therapeutic regulation of blood pressure. We should be watchful rather than officious. It is to be remembered that high blood pressure is a compound of two conditions, viz., increased peripheral resistance and augmented propulsive power of the heart, the former existing as a reaction against toxemia, and the latter as a response to increased work. It is self-evident that the therapeutic control of the condition must first concern itself with reducing as far as possible the systemic toxemia present. The *indicatio-causalis* is disintoxication. Regulation of the diet, the fluid intake, the personal hygiene in all its details and stimulating, to a reasonable activity, all the accessory organs of elimination, must constitute the basis of the therapeutic regulation of high blood pressure in Bright's disease, and other disorders characterized by high tension. The details of these various procedures have been frequently and fully elaborated by eminent authorities and I confess myself unable to add anything of importance.

The temptation to employ active vascular medication when the sphygmomanometer has demonstrated a high blood pressure is great, and the question as to when and to what extent we are justified in resorting to such artificial means of lowering high tension is a difficult subject on which to dogmatize. I therefore submit the following propositions, with a due sense of their inadequacy, not as absolute rules to be followed in all cases, but as tentative suggestions for the medicinal treatment of hypertension as the outcome of my own experience.

SUMMARY

1. Before proceeding with the exhibition of vascular drugs, the heart and circulation should be examined with the utmost care. The points of importance to be noted are the character of the heart tones, the relative degrees of hypertrophy and dilatation, the existence of gallop-rhythm, the pulse rate in both the upright and recumbent positions and after activity. Both the systolic and diastolic blood pressures should be carefully estimated in the recumbent and the upright positions and the degree of postural variation carefully noted, in order to determine a want of vigor in the ventricle. A rapid, irregular or intermittent pulse, the presence of galop rhythm, a mitral systolic bruit, inverse pulse and pressure record all point to cardiac inadequacy in face of the high blood pressure and may serve as indications for cardiac stimulation in place of, or in conjunction with, vaso-dilatation. Because the blood pressure is high, it does not

necessarily follow that vascular relaxants are indicated, it may be that cardiac tonics are more urgently needed

2 Excessive blood pressure of itself does not constitute an absolute indication for drug treatment, nor does it serve as reliable ground for a bad prognosis It is remarkable how well Nature accustoms herself to severe circulatory resistance, so that cardiac integrity is maintained and symptoms remain absent for long periods, with pressures of 200 mm, and even much higher The writer has patients at present under observation whose blood pressure, covering a period of two and three years, has seldom been below 200 mm, yet they have enjoyed a good measure of activity and freedom from symptoms One individual whose blood pressure has ranged from 200 mm to 265 mm for one year has remained practically free from symptoms It is well to accent the point that because the blood pressure is high it does not necessarily follow that it must be reduced by drugs in order to insure either the patient's safety or comfort.

3 Active vasodilators (nitrites) may occasionally be necessary to meet emergencies, such as stenocardia, angina pectoris, apoplexy prodromes, etc, under such circumstances they are perfectly justifiable and may be given with a freedom not at other times permissible

4 Blood pressure may be reduced temporarily by vasodilator drugs, but it is very difficult to produce a permanent lowering except in the presence of a weak heart This is easily understood when we remember that vascular pressure is a compound of ventricular propulsion and peripheral resistance If you modify the latter in the presence of a strongly acting ventricle, the pressure will be maintained by the heart Modify the peripheral resistance in the presence of a weak ventricle and the blood pressure will fall with a simultaneous increase in the pulse rate, due to inadequate efforts on the part of the heart to maintain pressure It follows, therefore, that a material fall in blood pressure which is more than temporary, due directly to vasodilators, especially if accompanied by quickened pulse rhythm and not marked by improvement in the patient's sense of well-being, is apt to be unfavorable, being ominous of a weak heart

5 A sustained high blood pressure (over 200 mm), if accompanied by symptoms of disquieting character, may render a course of vasodilator medication advisable The drug chosen should be slowly and cautiously introduced, closely watching its effects on blood pressure, pulse rate and subjective state of the patient. The sudden employment of full doses of an active vasodilator is to be condemned, as it may produce serious consequences to the patient's heart and nervous system A fall of 10 to 15 per cent is, as a rule, all that is necessary or judicious to accomplish by drugs

6 The benefit derived from vasodilator medication can not be properly gauged by the blood pressure record The patient's subjective comfort and more especially the pulse rate form a better index of the effect produced The most favorable influence in my experience has been in cases where no manifest fall in blood pressure has resulted, but subjective disturbances have disappeared, and the pulse has diminished in frequency I should say as the result of personal observation that the case which above all others will be best influenced by vasodilators is one in which the blood pressure is high (over 200 mm), and in which no direct response to the drug in the pressure record is apparent, but merely the indirect response in pulse rate and bodily comfort as above noted

7 The employment of vasodilators in the late stages of Bright's disease with cardiac dilatation, dropsy, etc, is practically useless, and were it not for the fact that the vasomotor control of the peripheral circulation is too much disturbed to respond, they might do harm The fact that the case was primarily one of high tension forms no excuse for continued reliance on these drugs under such circumstances

103 State Street

GONOCOCCUS-CONJUNCTIVITIS IN ADULTS AND INFANTS

A REVIEW OF TREATMENT AND RESULTS IN ONE HUNDRED AND TWENTY-NINE CASES IN THE PHILADELPHIA GENERAL HOSPITAL DURING THE PAST SIX YEARS *

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The study of the following 129 cases of gonococcus infection of the conjunctiva, occurring in the services of Drs G E de Schweinitz, C A Oliver, H F Hansell and J W Croskey in the Philadelphia General Hospital, covers a period extending from May, 1900, to July, 1906

For a convenience and for more accurate study such a series would naturally divide itself into two groups

1 Those in which the infection occurred subsequent to labor, or gonococcus-conjunctivitis

2 Those in which the infection could be traced directly to birth, or conjunctivitis neonatorum

In using the term gonococcus-conjunctivitis in preference to gonorrheal, I follow the suggestion of Holt, because it eliminates a factor which is wholly lacking in many of these cases Of the 129 cases that came under observation, 72 cases could be included under Group 1, or gonococcus-conjunctivitis, and 57 under Group 2, or conjunctivitis neonatorum Of these 72 cases of the former involving 106 eyes, 54 cases occurred in adults, 44 of which were males and 10 females, while the remaining 18 cases were among children and only 4 of these were of the male sex The cause of this apparent influence of age on the frequency of this affection in the two sexes is obvious and will be referred to indirectly later on

Among the adults there was a bilateral involvement in 19 cases and a unilateral involvement in 35 cases and strangely enough, in the latter series the left eye was involved twice as often as the right, the actual numbers being 23 and 12 Among the children 15 cases were bilateral and 13 unilateral

GROUP I, OR GONOCOCCUS-CONJUNCTIVITIS

Positive reports of bacteriologic examinations were obtained in 48 cases, and, while in the remaining 24 no record of such an examination could be found 16 of them had associated gonorrhea, which leaves but 8 partly unaccounted for Of these a history of accidental infection from probably contaminated eyes was obtained in the cases of 2 female children and 1 female adult, one male adult had had two previous attacks of gonorrhea the last 6 months before his eye became involved, but stated he had no urethral discharge at the time, another male adult denied gonorrhea, but there was no record of an examination In the remaining cases two male adults and one male child no dat[illegible] were recorded It should be stated that [illegible]

* Read before the Section of Ophthalmology of the College of Physicians of Philadelphia Nov 20 1906

ords that failed to give bacteriologic data were filed before the present efficient laboratory system was instituted, and some of them were due to the failure of the resident to record results of such an examination

On admission to the eye wards 42 of the 106 eyes were found to have some corneal involvement, while no data of the same could be found in 64 Sixteen of these 64 eyes that entered with clear corneæ subsequently developed some abnormalities in this structure, so that on discharge 48 corneæ had remained clear and 58 had undergone some change consequent to the gonococcus infection

In those cases in which no vision was recorded and in which some corneal involvement had occurred, by knowing the site of the lesion and such remarks as "cornea much clouded," "macula near corneo-scleral junction, etc, a crude estimate of the probable effect on vision could be made It should be stated that where the eye was lost or only light perception remained, such conditions were almost invariably recorded By such procedure it was found that of these 58 eyes that suffered some corneal change, 8 were enucleated, 21 were blind or had but light perception, 10 had a moderate reduction of vision, while in 19 sight remained unimpaired or was but slightly affected It is thus seen that where the cornea became involved it resulted in a practical loss of just 50 per cent of the number of eyes affected

If we follow out the 16 cases in which the cornea became involved while in the house, we find that 2 eyes were enucleated, 4 were blind or had but light perception, 3 showed a moderate reduction in vision and there was but slight or no impairment in 7 eyes It may be stated that one of these 16 eyes had a peripheral ulcer that perforated as the result of a blow from the patient's thumb, but owing to the site of the lesion he recovered with some vision It can thus be seen that in 6 of these 16 eyes, or 37 5 per cent, there was practically a total loss of vision

It was rather interesting to trace out how many of these 72 cases of gonococcus-conjunctivitis were due to a probable autoinfection As above mentioned, there were 44 cases among male adults, and, of these, 32 had a urethritis, while in 12 the records failed to state its presence or absence Of the 4 male children involved there was no record of any associated gonococcus infection, 5 of the 10 cases in female adults had the clinical manifestations of a gonorrhea, while in the remaining cases no note was made as to its presence, 6 of the 14 cases in female children also had the clinical manifestations of a gonorrhea, bacteriologic examination verifying the diagnosis in 4 cases, while in one other a suppurating bubo developed It is not likely that any one familiar with the conditions at Blockley would take exceptions to the conservative statement that probably 90 per cent of the male adults treated for gonococcus-conjunctivitis could be shown to have an associated gonorrhea if proper measures were pursued Also, that if carefully prepared smears were made from the cervix or from Bartholin's and Skene's glands in the female, fully 50 per cent of those delivered at the maternity and who suffered from gonococcus-conjunctivitis would show some form of associated gonococcus infection Such being the condition of affairs, these cases do not excite the same amount of sympathy as do the children that come under observation for gonococcus-conjunctivitis where if there is a vaginitis existing in the female, it is almost invariably one of accidental infection

All of us are familiar with the increase in recent years of gonococcus-conjunctivitis in young girls, due probably to the increased frequency of vulvo-vaginitis in these children While vaginitis or vulvo-vaginitis in children probably belongs more accurately to gynecology, nevertheless it has a distinct bearing on ophthalmology, and, in my opinion, deserves more consideration than has been accorded to it in the past

A number of excellent papers have been written on this subject in recent years, among which may be mentioned one by Dr Sara Welt-Kakels[1] and another by Dr Emmett Holt[2] As is now well known, this affection has a marked tendency to become epidemic in institutions for children and is exceedingly difficult to stamp out, probably more so than any of the so called infectious diseases of childhood Holt found that in the early years of his experience with this affection in the Babies' Hospital in New York that sterilization of the napkins was not sufficient. Subsequently all cases were isolated, given special nurses and separate personal utensils, wash rags and sponges were forbidden and a separate laundry established, but with all this they were not fully able to control the disease It was not until bacteriologic examinations were made in all children applying for admission that they obtained some control over this intractable and markedly infectious condition He states that during eleven years but 6 cases of gonococcus-conjunctivitis developed in the house, and 4 of these were among the 273 cases of vaginitis It is also interesting to note that there were 26 cases of gonococcus arthritis, 19 of which occurred among male children, of these 19 cases but one had a demonstrable associated gonococcus infection and that was a conjunctivitis Smears were made from the eyes, nose, mouth and urethra with negative results One of these cases of arthritis without other demonstrable gonococcus infection was the probable origin of subsequent cases of vaginitis that developed in the same ward

It is but fair to assume that what has occurred in the New York institutions has likewise been going on in our own city Without any effort at investigating the true state of affairs, I know of three hospitals in this city that have had epidemics of this affection within the past six months, and one of these was compelled to refuse admission to all female children during a portion of the past summer In Blockley since March 27, 1906, there have been 38 cases among 183 children without the development of one case of gonococcus-conjunctivitis This is unquestionably due in a great measure to the rigid routine now in force, as may be illustrated by the following case A child who had had a vaginitis for some time was discharged on the urgent demands of the parents, only to return a week or some ten days later with a well-developed gonococcus infection of the conjunctiva Among the 14 cases of gonococcus-conjunctivitis in female children occurring in the present report, the records show that 11 were admitted to the eye service from outside sources As to the 3 that were transferred from other house services, one had vaginitis and later developed a bubo, while in the remaining two no note was made as to the existence of a vaginal discharge

I have dwelt more fully on this condition of vulvo-vaginitis in children because it seems to me that we can no longer look on a gonococcus infection of the conjunctiva as a condition which affects the eye alone but must regard it as a possible origin of infection that may

1 N Y Med Jour October 1904.
2 Ibid March 1905

jeopardize and mar the whole future usefulness and life of the individual so affected While I appreciate the many difficulties that often attend the treatment in private practice of these cases of gonococcus infection of the conjunctiva, it seems to me that all such cases, especially where other children are in the house, must be treated with the same restrictions that one would institute in a case of any of the so-called infectious diseases It also seems essential that the nurse in charge should be told of the increased susceptibility of the vaginal mucosa in children and be given definite instructions for guarding against a possible infection of the same As can be shown by this report, and as would naturally be expected, the greatest amount of danger to the eye from a specific vaginitis does not arise among hospital cases, but in cases outside the same or where they have been discharged from these institutions before a definite cure has been established

With a knowledge of this increasing prevalence of gonococcus infection in young girls, in my opinion, ophthalmologists would not be adopting a too radical procedure to have a vaginal examination made in these cases immediately on their admission to the general eye wards This could be readily done at the time the child is bathed without in any way attracting the attention of the patient to the examination desired

Among the 54 cases in the present series that occurred in adults, 6 gave histories of accidental infection, these being equally distributed between the two sexes Of the males, one attributed the infection to a public towel, another to sleeping with a man who had a purulent discharge from the eye, and the third, the day before the eye became involved, had a foreign body taken from his eye by means of a handkerchief borrowed from a friend Needless to say, all of these strenuously denied gonorrhea, and no record could be found of such an associated affection As to the women, one on the day previous to her first symptoms examined the inflamed eye of a friend, another nursed a child whose eye became sore three days after birth, while the third case was probably infected by her husband who had an acute gonococcus urethritis at the time her eye became involved This last case I sent into the hospital and it may have been an autoinfection, but, if so, her original infection was probably of recent date, for I was told she had none of the clinical manifestations of a gonorrhea one month before, at which time she was delivered of a healthy baby who failed to develop a conjunctivitis, and no instillation was used after delivery aside from boric-acid solution By way of interest I may add that this eye showed a virulent infection and quickly ran a destructive course and was finally enucleated

In reference to the children, as above stated, none of the 4 cases in males gave histories of an associated gonococcus infection While in but 6 of the 14 females was there recorded a history of co-existing vagnitis

GROUP II, CONJUNCTIVITIS NEONATORUM

Taking up the 57 cases of conjunctivitis neonatorum, we found that 24 cases developed in the house and 33 were admitted from outside sources These were pretty evenly divided between the two sexes, 27 being males and 30 females Inasmuch as during the past six and a half years which is the interval covered by the present series of cases, there were delivered, in the maternity wards, some 1,076 infants it is evident that 2 2 per cent of these children developed conjunctivitis neonatorum. Of the whole number of cases, 52 were bilateral and 5 unilateral, making the total number of eyes involved 109 Records of bacteriologic examinations were found in nearly all of these cases, 50 giving positive reports, 3 were negative and in 4 cases no note could be found of such an examination, although in one of these the father was known to have a urethritis and the mother a vaginal discharge Of those cases credited with negative reports, one had but one examination made, was born in the house, developed symptoms two days after birth and had the clinical manifestations of a conjunctival gonococcus infection, another likewise had the clinical symptoms and only one bacteriologic examination, but was admitted from the street, while to the third these same conditions would apply, with the exception that this infant had, in addition, a vaginal discharge

It is now the rule at Blockley to obtain three negative reports of at least 24-hour intervals before discharging the case, unless a premature discharge is demanded by the parent This seems to be a good working rule, but that it is none too rigid may be shown by one case in which three successive negative reports were obtained, only to be followed by five positive ones, before further negative results were determined Another case gave 6 successive negative reports and then a positive one, while numerous others showed two successive negative examinations that were followed by positive ones At this point it may be well to refer to the above-mentioned premature discharge of these cases The records show that at least 7 cases were discharged on the demand of the parent before an effectual cure had been established, and 4 of these gave positive reports on their last bacteriologic examination It seems to me that it would be well to follow up these cases after their departure from a municipal institution, such as the Philadelphia General Hospital, and not allow them to pass from medical observation for days or weeks at a time, as is probably often the case, this interval being largely determined by the apparent condition of the eye This difficulty could be overcome by direct communication from the hospital to the family physician, if they have a doctor acting in this capacity, or by having these cases visited by either the so-called district physician or the medical inspector in whose district the case resided, for it is well known that medical advice given to the majority of these patients on their departure from a hospital is woefully neglected and still more frequently absolutely unheeded In several instances where these cases were referred to outside sources, probable serious consequences were averted

On admission to the ward of these 109 eyes the cornea was clear in 95 while 14 revealed lesions of varying degrees of intensity While in the ward, or on discharge the cornea continued to remain free from any pathologic process in 84 eyes showing that in 11 eyes corneal changes had occurred while they were under observation

The probable effects on vision produced by the corneal changes in the 25 eyes showing such involvement at some time during their treatment was as follows 8 were blind or had but light perception 7 of these cases being admitted from the street and one from the house, while the remaining 17 cases had various degrees of impairment, several probably escaping with vision unaffected Among this last number 11 were ad[illegible]tted from the outside and but 3 from [illegible]use servi[illegible]n cerning the 11 eyes that dev[illegible]cal ch[illegible]e

under observation, 4 were blind or had but light perception, 3 of these entering the ward from without and one from within the house, while 7 had some probable visual defect, 5 of these entering the institution from the street and two being transferred from other wards

The mortality in the 57 cases above reported was high, 11 of them dying after varying terms of treatment as the result of associated gastro-intestinal or pulmonary lesions In fact it may be stated that a large number of the infants that came under observation showed marked evidences of malnutrition, and in two instances the records showed co existing evidences of hereditary syphilis

TREATMENT

Before referring to the specific treatment instituted in these two groups of cases, it seems appropriate to allude to a condition which frequently has a direct bearing on the ultimate result in these cases In gonococcus infections of the conjunctiva where success or failure of treatment is usually dependent on the condition of the cornea, we should take some cognizance of one of the important factors producing a change in this structure I refer to the excessive chemosis of the conjunctiva which is so common in this affection and which is very frequently the cause of corneal involvement by its impinging on this structure

Probably every observer has seen cases of slight corneal haze clear up after incisions were made in a much chemosed conjunctiva Such being the case, how easy it would be to attribute the saving of the cornea to medical rather than to surgical procedures Hence I believe we should know in what cases scarification was used and how much of the success attained was probably due to this procedure Unfortunately I could not find any data bearing on this important factor

In analyzing this series I have drawn the percentages from the number of eyes rather than from the number of cases because it seems to be the more accurate, for the latter method would fail to state whether the cornea became involved in one or in both eyes and it would also probably cause other faulty conclusions as to the true conditions The treatment sheets filed with the records show that argyrol was used routinely by but one of the four visiting chiefs Such being the case, it is but fair to surmise that in the majority of cases the severe infections were treated with that preparation in which the attending surgeon had the most confidence Within the past nine months I have had the privilege of hearing three of the visiting surgeons express their preference for nitrate of silver, and, judging from the frequency in which this silver salt was used by the other surgeon in attendance, he probably had the same preference

In the cases about to be referred to, the patients were put to bed on their admission to the eye ward, appropriate treatment was instituted to correct any constitutional impairment and, needless to say, when any associated gonococcus infection existed, proper measures were employed to combat the condition It also seems proper to allude to the faithful and efficient nursing which has been such a notable feature in this series of cases, and in fact is an essential factor in the proper management of the affection Atropin and eserin were used in those cases in which they seemed indicated

GROUP 1 —*Gonococcus-conjunctivitis* In these cases cold was consistently used in the early stages of the affection unless there was some co-existing corneal involvement Dr Miles Standish states[3] that he would regard heat as preferable if the aim of the surgeon is to reduce swelling If to affect further growth of the gonococcus, he refers to Kolle and Wassermann's statement that a growth of this organism is inhibited at the temperature of 86 F Dr Standish took the temperature of the conjunctival sac in a patient with gonococcus conjunctivitis before the application of ice and found a temperature of 100 F After the application of cold for 22 hours the temperature was reduced but 2 degrees, as a consequence he regards the application of cold as useless in inhibiting the growth of the organism Dr Weeks, in referring to this statement, stated that he had reduced the temperature of the conjunctival sac to 92 F by the application of cold which was at least sufficient to retard or limit the growth of the gonococcus Dr de Schweinitz, in the last edition of his book, states that in a certain number of cases of gonorrheal conjunctivitis in adults, during the early stage, cold is not only most agreeable to the patient, relieving pain and irritation, but of distinct value in checking the inflammatory process and the movement of the bacteria

In reference to the solutions used for cleansing, boric-acid solution was given the preference, with potassium permanganate a close second, while bichlorid solution, formalin and silver nitrate were each used in about an equal number of cases and would rank a poor third It may be said that in association with these sterile water and physiologic salt solution were used in some cases

THE SALTS OF SILVER IN GONOCOCCUS-CONJUNCTIVITIS.

The various silver salts used were the nitrate in 34 cases, argyrol in 20 cases, protargol in 2, nitrate of silver with argyrol or protargol in 9, no silver preparation was used in 5, and in 2 cases the treatment sheet was missing from the records

To obtain any idea of the effects of treatment the only cases available are those which entered the institution with clear corneæ Of these the records showed that silver nitrate was employed in 31 eyes, with subsequent involvement of the cornea in 8, or 25 8 per cent , argyrol in 20 eyes, with corneal involvement in 4, or 20 per cent., protargol in 4, with no subsequent corneal changes, nitrate of silver and argyrol in 6 eyes, with corneal involvement in 2, or 33 1/3 per cent , no silver preparation in 2, with one eye developing corneal changes, or 50 per cent, and in the case of one eye that revealed corneal involvement the treatment sheet was not among the records It is thus shown that 16 of the 64 eyes above enumerated developed some abnormalities in the corneal tissues Among these nitrate of silver was used in 2 eyes that were enucleated, one that was blind or had but light perception, one that had a moderate reduction of vision and 4 that had slight or no impairment So that among the 31 eyes in which nitrate of silver was used there was a practical loss of the eye in 3 cases, or 9 67 per cent In the eyes treated with argyrol 2 were blind or had but light perception, one had a moderate reduction, while another had but slight or no impairment of vision Here the practical loss of eyes would equal 10 per cent. In the 2 that suffered corneal changes when treated with nitrate of silver and argyrol one had a moderate reduction and another slight or no reduction of vision There was slight or no impairment of sight in the one case

3. THE JOURNAL A. M A. Dec. 17 1904

with corneal change where no silver preparation was used, while the process involving the cornea in the eye where no treatment sheet could be found, resulted in a blind eye

Standish[3] reports 32 cases treated with protargol with corneal involvement in 34 per cent and 23 cases treated with argyrol with subsequent corneal changes in 30 5 per cent He reports[4] an additional 29 cases treated with argyrol, so that in all he had treated 52 cases with this preparation with subsequent corneal involvement in 22 cases or 42 per cent

Standish, since the appearance of argyrol, has given the preparation a thorough trial and evidently still regards it as our best method of exhibiting silver in gonococcus infections of the conjunctiva, despite Derby's most interesting paper on the bactericidal properties of the various silver preparations now on the market. Derby,[5] in his laboratory experiments, used the *Staphylococcus pyogenes aureus* instead of the gonococcus owing to the difficulties attending the propagation of the latter by our present laboratory methods He found that nitrate of silver in 0 5 per cent to 2 per cent. solutions killed the culture in 2 to 5 minutes and that an exposure of 30 seconds to a 0 5 per cent solution was sufficient to prevent its growth Protargol in from 2 per cent to 4 per cent solutions killed in from 3 to 5 minutes, while a one-minute exposure prevented growth Collargol in a 4 per cent solution failed to prevent a growth after an exposure of an hour Ichthargan and argentamin in weak solutions both killed the growth after an exposure of 4 minutes, but he adds that both are very irritating

He states that argyrol's bactericidal properties are very weak and that a large series of observations gave a growth after an exposure of 1 to 2 hours to solutions the strength of which varied from 10 per cent to 50 per cent He calls attention to the experiments of Verhoeff and confirms his statements that if human blood serum be added to solutions of sodium aurate and protargol their bactericidal properties are destroyed He also states that he found that the action of Lugol's solution and bichlorid solution of the strength of 1 1000 was much retarded by serum such as hydrocele fluid and bovine blood serum

GROUP 2 —*Conjunctivitis Neonatorum* Here I deem it necessary again to refer to the general nutrition of the majority of the cases that come under observation in the Philadelphia General Hospital, a factor which has no little bearing on the ocular results in these cases

Inasmuch as the vast majority of these infants come from the lowest social strata in the city, poverty, ignorance and negligence are responsible for the advanced stages of malnutrition so frequently seen on their admission and renders a prognosis grave, not only from an ocular aspect, but from a systemic one as well

In taking up the cases in this group we find that cold was used in the initial stages in the majority of cases, but not as consistently as in Group 1 For cleansing, boric acid was used in 36 cases, potassium permanganate in 14, formalin in 5 and bichlorid in 2 cases Here, as in Group 1 sterile water and physiologic salt solution were used with the above in some cases

THE SILVER SALTS IN CONJUNCTIVITIS NEONATORUM

As to silver, the nitrate was used in 32 cases, argyrol in 8, nitrate of silver and argyrol in 9, the nitrate and protargol in 1 and no silver preparation in 7 cases It is interesting to note the result in this last group for these 7 cases treated without any silver preparation recovered with the cornea intact or at least no note of any lesion could be found on the records Whether the result obtained in these few cases was influenced by the less amount of manipulation required, by the character of the infection or by the few cases reported, can not be determined, but probably all were contributing factors

Referring again to those instances in which the eye was free from corneal involvement on admission, we find that 50 of these eyes were treated with nitrate of silver, with subsequent corneal involvement in 6, or 12 per cent, 14 eyes were treated with argyrol, in which but 1 developed corneal changes, or 7 14 per cent , 16 with nitrate of silver and argyrol, with 2 showing corneal changes, or 12 5 per cent., 2 with nitrate of silver and protargol, in both of which the cornea became involved, while in 13 eyes no silver preparation was used and, as above stated, none of these developed abnormalities of the cornea Standish reports 50 cases treated with nitrate of silver with corneal involvement in 5 6 per cent., 150 cases treated with protargol, with corneal changes in 2 per cent, and 201 cases with argyrol in which only 4 cases, or 2 per cent, developed some corneal abnormality

In the 11 eyes that developed some change in the corneal structure while under observation, the treatment was as follows With nitrate of silver one eye was blind or had but light perception, while in 5 there were varying degrees or no visual impairment This gives a total loss of vision in 2 per cent of the eyes so treated

With argyrol one eye became blind or a total loss of vision in 7 14 per cent In the 2 eyes with corneal involvement treated with nitrate of silver and argyrol, neither resulted in a destruction of vision while in the 2 treated with nitrate of silver and protargol the corneal changes were extensive and produced blind eyes

In conclusion, it may be noted that at Blockley both the Crede method and the instillation of argyrol are used at the maternity At the University maternity, argyrol has been consistently used during the past year or two, while at the Preston Retreat I have been told that argyrol was abandoned about one year ago and that the Credé method is now exclusively employed At the Maternity Hospital the Credé method alone is used

1928 Chestnut Street

4 Ophthalmic Record August 1906
5 Boston Med and Surg. Jour Sept. 27 1906

A CONTRIBUTION TO THE STUDY OF THE OPSONINS

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While engaged in the study of the opsonins there arose the following questions which have not received appropriate consideration in previous publications and which, nevertheless, are deemed important

1 What influence has the strength of the bacterial emulsion on the phagocytic index and the percentage of phagocyting cells?

To this end an emulsion of the *Staphylococcus aureus* of definite strength was prepared and progressively diluted, the serum and corpuscles came from a healthy individual The results are shown in Table 1

In this table it will be observed that the phagocytic index and the percentage of phagocyting cells are, generally speaking in direct proportion to the [illegible] of bacterial emulsion This influence [illegible]

TABLE 1

No of cocci per c mm	No of cocci per leucocyte.	Percent. of phagocyting cells.
11 800 000	7 3	100
8 850 000	4 7	97
5 900 000	3 7	87
4 425 000	3 2	87
2 950 000	2 8	86
2 212 500	2 4	71
1,475 000	2 0	74
1,106 250	1 8	75
737 500	1 6	67
553 000	1 0	47
368 750	0 85	42
276 500	0 80	57
138 250	0 58	36
138 250	0 58	36
69,125	0 49	29

strength of the emulsion is further shown in Table 2, in which both the opsonic bacillary index (Wright) and the percentage index (Simon) are worked out

TABLE 2

No of cocci per c.mm	No of cocci per leucocyte		Percent of phagocyting cells		Wright's index	Simon's index.
	Patient's serum	Pool	Patient's serum.	Pool		
3 750 000	2 54	3 15	87	82	0 80	0 94
1,875 000	1 68	1 90	68	70	0 88	0 85
937 500	1 26	1 36	58	65	0 90	0 89
168 750	1 02	1 78	50	45	1 30	1 11
234 375	0 73	0 71	37	33	1 02	1 05

2 What effect has the period of incubation on phagocytosis? To determine this point charged pipettes were incubated for varying periods of time at 39 C The phagocytic index and the percentage of phagocyting cells were then determined as usual The strength of the bacterial emulsion corresponded to 937,500 cocci per c.mm

TABLE 3

Period of incubation	No of cocci per leucocyte.	Percent of phagocyting cells
15 minutes	1 36	65
30 minutes	2 24	65
45 minutes	2 80	87
60 minutes	4 00	90
90 minutes	4 01	90

The results show that with a long exposure both the phagocytic index and the percentage of phagocyting cells undergo a distinct increase, the maximum being reached in one hour After two hours the degenerative changes in the leucocytes become so extensive that accurate observations are rendered impossible

3 Does phagocytosis occur at room temperature, viz, from 13 to 15 C ? Pipettes were charged as usual and left for varying periods of time as indicated in Table 4

TABLE 4

Period of exposure.	No of cocci per leucocyte	Percent of phagocyting cells
One hour	0 18	14
Two hours	0 76	35
Three hours.	0 89	36
Six hours.	1 22	47

This shows that phagocytosis does occur, but that an exposure of fully six hours is necessary before the extent of phagocytosis reaches those figures which we usually see after fifteen minutes exposure at body temperature

4 What effect has the number of persons composing the pool on the opsonic index? In determining the above question the sera of ten healthy persons were collected and mixed in equal proportions, thus giving ten pools, containing from one to ten sera With these the opsonic index was determined, using an emulsion of the *Staphylococcus aureus* The normal serum gave 56 per cent of phagocyting cells, with an average number of cocci per leucocyte of 1 14

Table 4 shows plainly the advantages of Simon's percentage index over Wright's bacillary index, which latter will vary to a greater extent if cells are included in the count in which maximal numbers of organisms are contained, which is frequently almost unavoidable, owing to the difficulties which attend the preparation of perfectly homogenous emulsions With specially satisfactory emulsions the two indices practically coincide It is apparent that Simon's index is thus a check on the bacillary index

TABLE 5

Pool	Percent. of phagocyting cells.	No cocci per leucocyte	Wright's index.	Simon's index.
One person	62	1 24	0 91	0 90
Two persons	57	1 18	0 96	0 98
Three persons	60	1 42	0 80	0 93
Four persons	56	1 16	0 98	1 00
Five persons	64	1 19	0 95	0 87
Six persons	71	1 52	0 75	0 79
Seven persons	58	1 11	1 00	0 96
Eight persons	60	1 40	0 81	0 93
Nine persons	68	1 48	0 77	0 82
Ten persons	71	1 52	0 75	0 79

If we interpret the finding in Table 5 in this sense, the variations in Wright's index are readily explained, and it follows that a simple or at most a double mixed pool is necessary for ordinary purposes, a conclusion to which I believe Wright himself has come

5 What effect has the age of the culture on phagocytosis? An emulsion (a) was made from a 46-hours-old culture containing 2,350,000 cocci per c mm , and a second emulsion (b) from a 42-days growth containing 3,380,000 cocci per c mm In the first instance the average number of cocci per leucocyte was 4 84 and the percentage of phagocyting cells 95, while in the second case the phagocytic index was 9 6 and the percentage of phagocyting cells 99 It follows that the aging of the culture does not lead to a drop in the phagocytic or percentage index

6 What effect has boiling and the addition of preservatives to bacterial emulsions on phagocytosis? The above emulsion (a) was placed in boiling water for 30 minutes, after which the phagocytic index was 7 18 and the percentage of phagocyting cells 96 This heated culture was then preserved for 3 days with about 0 25 per cent of lysol The average number of cocci per leucocyte was now 2 81 and the percentage of phagocyting cells 77

One portion of emulsion (b) was similarly preserved with thymol and the remainder with chloroform for 3 days In the first instance the phagocytic index was 8 03 and the percentage of phagocyting cells 95, and in the second 8 43 and 98 respectively

This shows that boiling, thymol and chloroform have no inhibitory effect on the opsonic values, so far as the usual technic goes, while lysol seems to produce a decrease

7 How long do the opsonins remain active? In other words, how long can the serum be kept before examination using the small quantities which are usually taken?

The results show that the serum loses one-half of its opsonic power in 24 hours, after this there is practically no further loss in the following 24 hours The value then rapidly drops, but, however, does not wholly disappear until after 5 days It is to be noted that the serum was collected and kept in a sterile condition (Table 6)

How long do the corpuscles retain their capacity for

TABLE 6

Age	Phagocytic index.	Percent. of phagocyting cells.
Fresh serum	4 08	92
Twenty four hours old	1 92	72
Two days old	1 90	70
Three days old	0 39	22
Four days old	0 39	19
Five days old	0 14	8

phagocytosis? In this instance also the corpuscles were kept sterile and fresh serum used in every case (Table 7)

TABLE 7

Age	Phagocytic index	Percent. of phagocyting cells
Fresh corpuscles	1 09	45
Twenty four hours old	0 61	29
Two days old	0 30	18
Four days old	0 09	8

The results show that only fresh corpuscles can be used in opsonic work, and my experience has been that after six hours many of the cells are dead and that fallacious results are obtained if such cells are used

9 How many cells must be counted in order to obtain a satisfactory result? Emulsions of various strengths were prepared, and both the bacillary and Simon's index determined for 25, 50, 75, 100, 150, 200, 300 and 400 cells respectively The results are shown in Table 8

TABLE 8

A. Emulsion of 2 000 000 cocci per c.mm

Cells counted	Wright's index.	Simon's index.
25	1 00	1.26
50	0 97	1 00
75	0 96	1 00
100	1 09	1 02
150	1.16	1 12
200	1 23	1 20
300	1 18	1 11
400	1 27	1 15

B Emulsion of 666 666 cocci per c.mm

Cells counted	Wright's index	Simon's index
25	1 85	1 18
50	1 32	1 16
75	1 03	1 00
100	1 25	1 02
150	1 30	1 02
200	1 12	0 97
300	1 13	1 04
400	1 06	1 00

C Emulsion of 222 222 cocci per c.mm

Cells counted.	Wright's index	Simon's index.
25	1 20	0 60
50	1 62	1 14
75	1 75	1 27
100	1.75	1 26
150	2 21	1 60
200	2 15	1 70
300	2.00	1 62

D Emulsion of 74 074 cocci per c.mm

Cells counted	Wright's index	Simon's index
25	No index	No index.
50	0 66	1 00
75	0 50	0 62
100	0 57	0 70
150	1 14	1 26
200	1.18	1 15
300	0 95	0 96
400	1 05	1 11

The results show that with weak emulsions the chances of error are greater than with stronger emulsions, bearing in mind that with too rich emulsions counting becomes difficult, if not impossible

In these experiments, likewise, the advantage of Simon's index is at once apparent, although with the weaker emulsions it also becomes somewhat uncertain

In conclusion I wish to express my appreciation to Dr Charles E Simon, at whose suggestion the above experiments were undertaken

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Induced Hyperemia in Treatment of Acute Infections.—G Fichera publishes in the *Policlinico*, xiv, 6, 1907, the results of extensive experimental and clinical research on the efficacy and the mechanism of Bier's stasis hyperemia His article is illustrated and is accompanied by nearly 8 pages of international bibliography on the subject His conclusions are to the effect that the hyperemia induced retards the circulation through the part, while the transudation and diapedesis impede the general invasion of the organism by the bacilli At the same time as the medium becomes less favorable for them they fall a prey to the migrating leucocytes as phagocytosis is exceptionally active under these conditions

GONORRHEAL PROSTATITIS *

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The constancy with which prostatitis occurs when gonorrhea invades the posterior urethra, and the persistent nature of that inflammation after the subjective symptoms, and the more evident of the objective symptoms, have subsided, give this condition the right to more consideration

That a gonorrheal inflammation of the posterior urethra ever occurs without involving the prostatic ducts to a greater or less degree seems unlikely Anatomically there is little to invite a posterior urethritis to the exclusion of the prostate The character of the epithelia, the scarcity of mucous glands, and the almost vertical direction of the canal, which is distended so much of the time with urine and made one with the bladder cavity, are factors against a theory that the prostatic urethra can be affected with a gonorrheal infection without the prostate participating

Acute gonorrheal prostatitis—the division of this affection into the catarrhal, the follicular, and the parenchymatous forms—may well be accepted as expressing the clinical varieties, providing the tendency of one form to merge into another is appreciated

CATARRHAL PROSTATITIS

This form is by far the most frequent of the acute varieties It is highly probable that with every posterior gonorrhea there is some involvement of the prostate and though it may extend but a short distance into the prostatic ducts and be relatively mild, it is obvious that its existence should be appreciated

The symptoms of catarrhal prostatitis go hand in hand with the symptoms of posterior urethritis—the increased desire to urinate, the cloudiness of both portions of urine, and the characteristic small, round and comma-shaped shreds which so often appear These filaments, when examined microscopically, are usually small plugs or casts made up of mucus, pus cells, cuboidal and cylindrical epithelia, and gonococci The prostatic origin of these shreds is not difficult to prove If after a portion of the urine is voided light digital pressure is made on the prostate, the shreds are squeezed into the urethra and carried out with the urine which is then passed

The danger of manipulating the prostate during an acute inflammation of that organ is ever to be borne in mind on account of its tendency to produce not only an acute epididymitis but an extension of the prostatic involvement as well The clearing up of the acute posterior urethritis is, I believe, seldom accompanied with a resolution of the catarrhal prostatitis Its tendency is to go on to a chronic condition

The diagnosis must usually be made by the urine, as examination of the gland by the rectum frequently fails to show any change in size or consistence or give any areas of tenderness

FOLLICULAR PROSTATITIS

This may be an extension of the catarrhal form or it may follow directly the onset of an acute urethritis posterior The process of inflammation extends in a selective way along certain ducts toward the periphery of the gland and usually in its upper part there to establish by purulent or cystic distension of the alveoli, the small nodules or tender areas detected by digital exami-

* Read before the Section on Genito-Urinary Diseases of the New York Academy of Medicine November 21 1906

nation The symptoms accompanying this phase of acute prostatitis are not unlike those of the previous variety—increased and usually painful urination, the pain intensified at the close of the act, both urines cloudy, and the comma-shaped shreds, which are seldom absent

Follicular prostatitis, like the catarrhal, tends to become chronic The treatment during the acute stage consists in the treatment of the urethritis, by the avoidance of bodily exercise, by the avoidance of local manipulation of the prostate, and by the avoidance of constipation, and the institution of such measures as will tend to reduce the existing congestion and inflammation

PARENCHYMATOUS PROSTATITIS

In its milder forms this is clinically identified by the hyperemia or congestion of the entire gland By the rectum the prostate is felt to be evenly swollen and smooth, and its consistence is elastic or edematous, though, from time to time, only one of the lateral lobes is found thus affected

Although the organ is distinctly sensitive to pressure there is no sharp pain, but the patient experiences a sense of fullness in the perineum Urination is made more difficult and painful and defecation is attended with pain and discomfort There is no fever The condition under appropriate treatment may subside in a few days and all subjective symptoms disappear or it may go on to chronic prostatitis or take on the progressive course ich we recognize as the severer form of parenchyma- prostatitis, and which at times ends in abscess for- n Here we find a patient suffering with a painful of pressure and swelling in the perineum and rec- n Micturition usually becomes difficult and painful, though in some cases this is absent, while in other cases there is complete retention Pain may radiate to the glans penis, to the thighs or across the back Defecation may be very painful and erections and pollutions distressing Fever may be present and accompanied by chills, though Casper had 21 cases which went on to prostatic abscess, and among them only four had a rise of temperature On palpation the neighboring parts are found extremely sensitive, while the rectal examination of the prostate is exquisitely painful

The gland is found swollen to twice or four times its normal size It feels hot and is hard and tense, being sharply defined against the surrounding softer structures Its surface is smooth, seldom irregular and one side only may be affected

Notwithstanding the severity of the process, it may not go on to abscess formation, but, in from one to two weeks, the symptoms may subside and resolution take place This, fortunately, occurs in the larger proportion of cases, which then go on to a chronic condition

When suppuration does occur, the clinical picture usually becomes intensified The pain on urination is increased ischuria is common and the prostate becomes a pulsating and painful tumor Rectal tenesmus is constant The temperature rises the tongue becomes dry thirst is intense and the appetite gone, headache and backache ensue Thrombosis of the periprostatic venous plexus or in the prostatic veins themselves may take place and go on to a typical occurrence of pyemia It is usually not difficult to detect suppuration in the inflamed prostate

Surgical interference is at this moment demanded If it is delayed, the abscess usually empties itself and most commonly into the urethra The urine then becomes loaded with the products of suppuration, and the fever, the dysuria and the rectal tenesmus rapidly subside It may be that the evacuation of pus is incomplete, and in this instance the disappearance of symptoms is delayed and the process may proceed to a chronic condition Complications, such as infiltration of urine, gangrene, chronic septicemia, or fistula, at times ensue

Next in frequency to the urethra as an exit for the pus, come the rectum and the perineum in the order given In Segond's collection of 102 cases, perforation occurred 64 times into the urethra, 43 times into the rectum, 15 times into the perineum, 8 times into the ischiorectal space, 3 times in the inguinal region, twice through the obturator foramen and once each through the navel, through the ischiatic foramen, at the border of a false rib, into the abdominal cavity and into the space of Retzius The after-results of prostatic abscess may be chronic suppuration, neurasthenia, impotentia generandi, stricture of the rectum, etc It is to be borne in mind that besides the complications which not infrequently attend suppurative prostatitis the mortality is considerable In the 102 cases of Segond's referred to above, there was a 34 per cent death rate This is, however, considered very much too high according to other observers

The treatment of these severer forms of parenchymatous prostatitis is both general and local The patient should be put to bed a light diet given and the lower bowel kept empty Urinary antiseptics should be given and warm applications or sitz baths prescribed Early in the process the direct application of cold to the prostate by means of one of the instruments designed for that purpose is often apparently of great benefit The severer pain and dysuria must be controlled by opium or its alkaloids A complete retention of urine demands catheterization With the breaking down of the process into abscess formation comes the necessity for surgical relief

CHRONIC PROSTATITIS

This condition assumes a degree of importance which the acute varieties cannot approach On the score of infectiousness acute prostatitis is little to be feared, as the active and painful nature of the condition renders the individual practically incapable of sexual intercourse On the other hand, chronic prostatitis, which is so often wholly devoid of subjective symptoms, is probably a fertile source of the infection of women In this connection it is to be especially noted that the great majority if not all of the acute inflammations of the prostate pass on to a chronic condition

To divide chronic prostatitis, of which the chief etiologic factor is the gonococcus, into pathological and clinical varieties is of little moment Clinically, the disease gives little evidence that can be put down as surely characteristic of one or another variety, and pathologically we usually find, in the same prostate, changes belonging to various forms of inflammation At the same time the fact is not to be overlooked that chronic gonorrheal prostatitis varies much in degree and in resistance to treatment

Symptoms—The majority of cases of chronic prostatitis run a mild course without subjective symptoms the patients voiding perfectly clear urine In others the symptoms are so well masked by the persistence of a urethritis that a precise diagnosis is difficult In the remaining class however some of the characteristic symptoms appear Disturbance of urination, the changes in the sexual function, abnormal sensations, referred pains

neurasthenia, suffering from pains across the back, down the thighs or in the testicles, constipation, pain before and after defecation, headache and mental depression With some patients frequency of micturition, which may be attended with pain, is the most prominent symptom and to this may be added the sense of not having completely emptied the bladder With other patients the disturbances of the sexual function seems to stand out as the chief difficulty, such as absence of normal sensation at the moment of ejaculation, pain with the seminal discharge, distressing and persistent erections at night, premature ejaculations and decreasing sexual ability It is in these individuals that we most frequently see the best marked types of sexual neurasthenia

Some authors hold that prostatorrhea is one of the chief symptoms of chronic prostatitis The writer's experience coincides with those who consider prostatorrhea as an unusual occurrence in this condition The combination of chronic prostatitis and cystitis is by no means uncommon In these cases the treatment of cystitis without recognition of the prostatitis, and attention to it, proves very disappointing

All cases of persistent urethral discharge or a persistent morning drop or those cases with a chronic and constantly recurring discharge, should be suspected and examined for prostatitis

Diagnosis—Although the subjective symptoms give a valuable clue to the condition, an exact diagnosis cannot be made without digital exploration of the prostate by the rectum and what is more important, microscopic examination of the expressed prostatic secretion

A knowledge of how the normal gland should feel in the different periods of life is essential to the appreciation of size, configuration, consistence and sensitiveness of the diseased organ The changes in prostatitis noted by palpation are many The gland is usually larger than normal, although this is by no means always the case, for in some instances it is found markedly atrophic Frequently one lateral lobe only is affected, or the organ may be very irregular in outline and feel as though it were made up of many lobes Nodulation may be abundant or there may be but one or two nodes and these may vary in size, consistence and location, but they are usually about the size of a pea, hard, and situated nearer the upper part of the gland The general enlargement of the prostate which results from a parenchymatous prostatitis usually gives an edematous feel to the organ, having lost its normal firm and elastic consistence it becomes, as some authors put it, flabby, this varying much in degree

The condition following the follicular form is varied The gland, as a rule, is not so large as in the postparenchymatous condition, but is usually harder, while here and there distinctly soft spots may be felt and the nodules are few or many, localized or scattered, as the case may be Where there has been suppuration with escape of the pus, involving the whole gland, or one lateral lobe, or as in the follicular variety, small areas the characteristic changes of contraction and firm cicatrices result and give that sense to the examining finger In other cases there is no change in the prostate that can be appreciated by digital exploration, and no degree of sensitiveness, in these cases the diagnosis depends alone on the study of the prostatic fluid Pain on palpation of the prostate is generally a sign of disease but by no means always and painful areas are not infrequently found in prostates otherwise negative to the digital touch

The secretion which is collected at the external urinary meatus upon digital compression of the prostate, after the urethra has been cleansed by urination or irrigation, consists normally of a thin, milky fluid, at times slightly viscid Its specific gravity is but little higher than that of water, it is usually faintly alkaline to the litmus test, and consists microscopically of lecithin globules, varying in size and usually present in great numbers, and epithelia which are partly cuboidal and partly columnar A few leucocytes are normally present and occasionally some red corpuscles Hyaline bodies of considerable diameter and the so-called *corpora amylacea* are not infrequently seen

The changes from normal which most commonly take place in the prostatic fluid are in consistence and color It becomes thicker, often flaky and yellowish or greenish-yellow from the addition of pus Under the microscope there are added to the field of lecithin bodies pus corpuscles in varying numbers, scattered or in clumps, depending on the extent or kind of inflammation In like manner epithelia from the ducts and alveoli are added, and these in different stages of degeneration Fat globules may be seen free in the field or in the epithelia or pus cells

The *corpora amylacea* seem to be much less frequently seen in gonorrheal prostatitis It is to be especially remembered that as long as the presence of pus cells can be demonstrated a pathologic condition exists Gonococci may be found in the pus cells and the fact that we cannot find them is not proof of their complete disappearance

Prognosis—When is the danger of infecting others past? When is a chronic gonorrheal prostatitis cured? To these questions no clean cut answer can be given

When the urine contains no more shreds or other abnormal elements, and the prostatic fluid is free from pus cells, and repeated search for gonococci with the microscope and by culture test fails, certainly we have no grounds on which to maintain that the patient is still afflicted with an infectious disease But on the other hand, we cannot positively say that such individuals have become noninfectious

After a few months or a year we find in a large number of the cases, the presence of gonococci impossible of proof Unfortunately, the mixed infection, which almost always complicates these cases, renders the task of clearing the prostatic fluid of pus cells exceedingly difficult, if not impossible Although it has been stated that so long as pus cells remain a pathologic condition exists, yet experience has taught that these cases are by no means always infectious

From the observation of 120 cases, von Notthaft has come to the following conclusions

1 In the second half year after the infection there was 73 per cent of the cases in which the gonococci could be proved to be present in the prostatic secretion In the third half year this percentage fell to 50 in the fourth half year to 18, in the third year to 6 From the end of the third year no gonococci could be found in the prostatic secretion

2 In the second half year there were other bacteria besides gonococci found in the prostatic secretion In the fourth half year there were no cases in which a pure gonococcic infection could be demonstrated

In a few patients from whom the writer made cultures the results were in accord with Notthaft's series [illegible] as mixed infection was concerned [illegible] or [illegible] the writer's cases were gonococci fo[illegible] scope or culture yet in five [illegible] siderably over 50 per cent [illegible] 18 months old In 7 out of [illegible]

growth of *Staphylococcus albus,* and in two of these there was added a growth of *Bacillus xerosis* In one case there was no growth

The conclusions to be drawn are that there is difficulty in proving the presence of gonococci in these older cases of chronic gonorrhoeal prostatitis, and that other organisms play an active part in the bacteriology of this affection

Treatment—Where a urethritis exists, either anterior or posterior, therapeutic measures designed for the cure of this condition must be instituted For the treatment of the chronically diseased prostate, massage of that organ by the rectum, constitutes the most important element of the treatment The bladder should be filled with some such mildly astringent antiseptic as protargol, ½of 1 per cent solution In very many cases dilatation of the prostatic urethra, either by sound or dilator, is helpful in the treatment by virtue of the internal massage and stretching it exerts, especially on the mouths of the prostatic ducts

Digital massage, to be useful, must be done in a systematic and purposeful manner Starting at the external upper part of the lateral lobe, the massaging finger-tip works its way toward the median line of the gland, again it is carried to the external border, immediately below the previous path of massage, and again worked toward the center This is continued until each lateral lobe has been thoroughly gone over Then the finger is swept over the lateral lobes downward and toward the center, emphasizing the pressure brought to bear on the median line, that the secretion may thus better be expressed into the urethra The patient then voids the solution which has been left in the bladder, which thus washes out the urethra and comes in contact with the recently emptied prostatic ducts, which as some think, may take up some of the solution on the principle of a sponge which has been compressed and is allowed to expand while in contact with a fluid This massage has two distinctly beneficial elements It empties the alveoli and their ducts of the perverted secretions which have accumulated, and it stimulates a more active circulation throughout the entire gland

Again a warning against the danger of extending the process in massaging a prostrate in which there still exists any active inflammation

The massage which is done very gently at first, should be repeated once, twice or sometimes three times a week, depending on the necessity of the case A few weeks' period of treatment for the milder cases up to many months of treatment for the severer cases, is required Besides massage such measures as electricity or heat and cold applied to the prostrate may in certain instances be helpful Medicinal suppositories as ichthyol, have a useful place in the treatment of prostatitis

The advancement of the patients' general condition cannot be neglected and freedom from worry or other untoward influences must be secured Favorable progress of the prostatitis is appreciated partly by the changes in the gland felt by the rectum, but more especially by the study of the prostatic elements microscopically Improvement in subjective symptoms is unreliable

Although the treatment is usually long and trying taxing the patience of the physician and his patient, yet with well directed and conscientious care on the part of the physician and earnest cooperation on the part of the patient the latter will be freed, in the greater majority of cases from the danger of infectiousness and other consequences of chronic gonorrheal prostatitis

TRAUMATIC NEUROSIS *

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Traumatic neurosis is a nervous disease following injury, in which there is no demonstrable structural lesion of the nervous system The symptoms are much like those of the common functional diseases of the nervous system, and may be spoken of as traumatic hysteria or traumatic neurasthenia Commonly, however, we find symptoms of both of these disorders in the same patient and not rarely the clinical picture may not be that of either of them

Litigation is a frequent complication which materially affects the clinical history It, not rarely, warps the judgment of the physician, and may doubly influence the patient, the many attendant conditions disastrously affecting his nervous system, while the money dangling over his head leads him, consciously or unconsciously, to distort his symptoms

The following cases are typical of a common form of traumatic neurosis, and a long period of observation gives special value to their study I append some consideration of special points of interest relating to the disease

Case 1—Mrs L, music teacher, aged 45 at time of injury, November, 1899

History—She was in a street car collision, a runaway car colliding with the one in which she was riding A physician found her fifteen or thirty minutes later lying on the floor of the car, in a dazed condition, with several cuts on her face and forehead, made by broken glass She was confined to bed for one or two months and invalided thereafter Her chief symptoms, and those she still presented when I saw her, were of a neurasthenic type Insomnia, restlessness, irritability, great sensitiveness, weak memory, lack of endurance, and incapacity for thought or action In addition she was very weak on her feet, had little use of the right hand, and there was a certain immobility of the head, because its movement caused pain in the cervical spine

Examination—I examined the patient in February, 1901, fifteen months after the injury had been received The examination was made at the request of her lawyer, as a suit for damages had been instituted The marked objective symptoms were a right hemiplegia and hemianesthesia The motor paralysis affected only the arm and leg, and not the face The gait was characteristic of hysteria, the paralyzed limb dragging behind instead of presenting the outward sweep of ordinary hemiplegia The sensory loss was of all qualities of sensation, touch, pain, temperature and muscular sense In the face the anesthesia reached to the median line On the extremities only a part was affected On the arm the ulnar side was anesthetic, the radial was normal On the leg the outer side was anesthetic the inner was normal The special senses were also affected there was loss of taste and smell on the right side, deafness of the right ear and amblyopia of the right eye There was, also, anesthesia of the mucous membranes on the right side, and, still more striking, loss of the corneal, nasal and pharyngeal reflexes For instance, strong snuff in the right nostril gave no response, while the same applied to the left caused immediate and violent sneezing The deep reflexes, knee-jerks as well as pupillary reactions and optic discs were normal

As this case was in litigation tests were made to determine the genuineness of the symptoms That of the nasal reflexes has already been mentioned The patient complained of great tenderness over the cervical spine and the genuineness of this symptom was proved by the considerable acceleration of the pulse caused by pressure over the seat of tenderness This is called the Mannkopf symptom In the same manner one could

* Read before the Cincinnati Academy of Medicine Dec. 7, 1906

demonstrate the feebleness of the patient, for a very little exertion caused considerable acceleration of the pulse The latter was also a test of the genuineness of the anesthesia, for when I applied a strong current of electricity with the brush to the normal skin, the pulse was again accelerated, while the same, or even a stronger current, applied to the anesthetic skin did not affect the pulse

The deafness and amblyopia were tested by Ziehen's method I tested the amblyopic eye, also, by placing prisms and opaque discs before the sound one All these tests proved the genuineness of the symptoms

The lawsuit was held about one year after the time of this examination In the meantime the changes that had taken place in the patient's condition had been rather for the worse

The litigation resulted in a large award for damages, which was paid at once I saw the patient several times in the next few months, but there was little if any improvement during that time. I recently heard from her physician—she does not live in Cincinnati—and he said that the motor paralysis had entirely disappeared, perhaps had done so two years after litigation was over, but he could tell me nothing regarding the anesthesia

I have no knowledge of the objective symptoms presented by the patient prior to the time of my first examination, but, from what I could learn, I have no doubt they were more marked when I saw her than at an earlier period Probably her condition became worse after litigation had been decided on She became rather worse during the year between the time of my examination and the time of the trial Thereafter, in the course of about two years, many or all of her symptoms disappeared There can be no doubt of the marked influence of litigation on the course and progress of the case At the time of my examination it appeared to me that there was a tendency to exaggeration of symptoms and that there was more muscular strength than she cared to make manifest But there are no simple tests of the genuineness of motor paresis as there are of sensory impairment The motor paralysis has disappeared It would be of interest to know if the same is true of the sensory paralysis

Case 2 —Mrs W , aged 48 at the time of injury, July, 1901, was injured in stepping off a car at night into a broken street She fell backward, striking the back of her neck. She first called in her physician three days after the accident. He found bruises over the left shoulder and arm, and that she was suffering with pain in the left side and back of the neck I have no accurate knowledge of the further development of symptoms, but she had various nervous symptoms and was finally sent to the Bethesda Hospital She was in the hospital from October, 1901, to May, 1902, part of that time having decided mental symptoms, but she was finally sent home much improved

Examination—I saw her about two years after the injury, at the request of her lawyer, as a suit for damages was about to be tried She presented the appearance of health, but was restless, irritable and excitable She complained, also of being unable to attend to her duties as housekeeper, and of having a poor memory, and much pain There was great tenderness over some of the cervical and lumbar vertebræ, her gait was feeble, the dynamometer indicated 60 as the strength of the right hand, and 26 as that of the left there was loss of the sense of pain over the whole of the left side, narrowing of the field of vision loss of smell in the left nostril, and loss of pharyngeal and nasal reflexes on the left side The knee-jerks Achilles tendon reflex, and pupillary reactions were normal

The genuineness of some of these symptoms, tenderness analgesia nasal reflex etc, were demonstrated in the manner described in the report of the first patient

As the result of the lawsuit the patient was awarded a large sum for damages The case was appealed, and eighteen months later a settlement was made for less than one-half the sum awarded her by the jury

Later Examinations—I had the opportunity to make two further examinations of this patient, the first a year after the trial, but before a settlement had been made, the other recently, one and a half years after the settlement. At the time of the first examination she had improved very materially, but she was still neurasthenic and the objective symptoms were still present, though less marked At the last examination, while there was even a greater improvement, she still complained that she was not so well as before the injury, and that there was some tenderness over the spine, and a degree of hemianalgesia.

It will be remembered that the patient did not consult a physician until three days after her injury and that the marked nervous symptoms appeared at a later date I do not know what influences may have played a part in the development of her disease, but we can not go far amiss if we attribute to litigation a part of the condition found when I examined her

Case 3 —Miss T , aged 28 at time of injury, April, 1900, was caught and dragged by a rope which happened to be hanging from a passing wagon She did not lose consciousness, but was considerably bruised, especially over the left hip and knee She suffered much, was confined to bed for several months, and since then had symptoms much like those presented at the time of my examination

Examination—I was called by her lawyer to examine her in April, 1902—two years after the injury—at the time of an impending suit for damages Her condition was as follows She spoke of her memory being poor and of getting the "blues" easily, though she enjoyed seeing her friends and was generally cheerful She complained, also, of severe backache and occasional headache, of poor sleep and little appetite. Menstruation was frequent and profuse.

I found her with rather a weak pulse, tremulous lips and tongue and manifestations of a left hemiplegia and left hemianesthesia The left leg was considerably paralyzed, the left arm was awkward in its movements, but without manifest loss of power There was impairment of tactile, pain and temperature senses in the left arm and leg as well as loss of smell in the left nostril, and amblyopia of the left eye The genuineness of these symptoms was demonstrated in the manner already mentioned The knee-jerks and Achilles tendon reflex were normal

A few days after this examination the trial was held, resulting in a large award to the patient. The case was appealed and payment was not made until nearly three years later I had the opportunity to examine the patient several times after this payment was made The sensory symptoms remained unchanged while the motor paralysis was more marked than at the time of my first visit My examination on these occasions was a hurried one and no effort was made to test the genuineness of the symptoms

Sixteen months after the payment had been made while the patient was visiting friends in the east, all her symptoms suddenly disappeared—in answer to prayer, she says[1] It was a case that was heralded by the papers throughout the land

I do not think there is any doubt of the influence of litigation in the course of this case

I wish to add a brief history of a case much like the preceding ones, but in which the question of litigation did not arise

Case 4 —Mrs M aged 66 at the time of the injury February, 1901, while sweeping the snow from her front steps slipped and fell to the pavement a distance of some half dozen steps Her daughter picked her up and assisted her to her room on the second floor Her strength at that time evidently was much greater than it was some days later when as her daughter states, she was practically as I found her nine months subsequently

1 A physician recently made an examination at my request and I found no objective symptoms The examination was necessarily a cursory one

Examination—When I examined her she presented a right hemiplegia and hemianesthesia, but the motor paralysis did not affect the face, and the sensory paralysis was not complete, there was impairment rather than loss of sensation, the leg being most profoundly affected In addition, the patient had much pain in the extremities, which doubtless accounted somewhat for their impaired use

I had the patient under observation for a number of months during which time there was no improvement in her condition I saw her again recently, nearly six years after the injury In the meantime she had very markedly improved The pains and anesthesia were almost gone, though a trace of the latter remained The grasp of the right hand was still feeble, and the dorsal extensors of the foot and the flexors and extensors of the toes were paretic.

It may appear from these cases that this disease is found chiefly in females, and, possibly, this is true But the appearance is accidental in this instance Of a list of cases I had selected for this paper, cases alike in the type of symptoms and duration of the disease, I was unable to trace the male patients, and do not know their present condition I was unwilling, therefore, to include them in this report

The cases I have just reported might be termed traumatic hysteria, though they, also, have a neurasthenic element.[2] Among the symptoms are the most characteristic stigmata of hysteria, hemianesthesia, contraction of the field of vision, etc There were also pains of various kinds and local tenderness, as well as symptoms of a neurasthenic type, such as lack of endurance, hypersensitiveness, emotionalism, irritability, depression and self-concentration

I have given the clinical histories somewhat in detail because they are rather typical of a fair proportion of cases of traumatic neurosis, at least of those of some degree of severity and persistence and which are common subjects of litigation Naturally other clinical pictures are often presented Among the cases of the hysterical type, while hemiplegic manifestations are the rule, paraplegia occasionally occurs, or the symptoms may be distinctly localized, or there may be spastic phenomena, such as tremor, contraction and spasm

In cases of the neurasthenic type we may find any or all of the symptoms common to neurasthenia Often there are but a few symptoms, localized pains and tenderness, which may be the expression of local injury, and change of disposition, the patient being sensitive, irritable and morbid Again, there are other cases in which the symptoms are so grave, for instance those of epilepsy or insanity, that we must believe there are profounder changes than those ordinarily found in traumatic neuroses

DIAGNOSIS

In diagnosis the question that confronts us is not so much whether or not we have a case of traumatic neurosis, for its manifestations are likely to force themselves on us, as whether or not we have, in addition, organic disease of the nervous system We should always look carefully for all symptoms of the latter, but, no doubt, organic disease is often present when its symptoms elude us In case of litigation the question naturally arises, have we to do with real diseases or only with simulation?

Simulation is not rare, and yet it appears to be the consensus of opinion among neurologists who have carefully studied the subject that too much has been attributed to it It is believed that an entire clinical picture such as I have above presented is rarely if ever, simulated while single symptoms possibly may be

In truth simulation is more likely to occur in those already ill, and, frequently, should be classed rather under exaggeration of symptoms, a phenomenon not rare in the sick, especially in hysteria, and which should not surprise us in this disease in which greed is offered such a tempting bait

In the report of the first case I mentioned tests which may be applied when the question of simulation arises, and there are other tests for the same purpose At the same time one must be careful not to be misled by such an examination For instance, the Mannkopf symptom—acceleration of the pulse on pressing on a point of tenderness—is a positive proof of pain, but, at the same time, painfulness does not always accelerate the pulse

PATHOLOGY

There has been much discussion of the pathology of traumatic neurosis, but little has been actually established The older conception, concussion of the spine, and the more common ones to-day, molecular changes and disarrangement of the nerve elements, mean little to us The intracellular changes found in fatigue, and which may be the basis of hysteria and neurasthenia, as well as of traumatic neurosis, are still far from established in that pathologic relationship It remains for the future to show whether or not there is some structural change in the nervous system in these cases Arteriosclerotic changes are not rarely found, but very likely they are the result and not the cause of the disease, sometimes the result of long continued depressing emotions

The pathogenesis is a more satisfactory subject to treat Dana's dictum, physical bruising and mental shock, is pointed and, doubtless, correct Mental shock is the most important factor Football players and others accustomed to danger, or in a state of mental absorption at the time of injury, appear to be not prone to the disease, though they are not altogether immune As predisposing factors to the disease a neuropathic disposition stands uppermost Alcohol sometimes plays a part

PROGNOSIS

What is the prognosis of traumatic neurosis? Some figures of Putnam throw light on this question They are based on the study of one hundred cases, with mainly hysterical symptoms, typical anesthesias, etc, in three-fourths of which the patients had instituted claims for damages From three to twenty years elapsed between the time of injury and the final record of the case Twenty-five per cent of these patients remained more or less invalided Sudden recovery was very rare Knapp gives figures much less favorable than Putnam's In not more than half of his cases did any improvement take place In his array of cases the severer types of traumatic neurosis usually followed the severer injuries and vice versa

The paraplegic type of traumatic hysteria has a less favorable outlook than the hemiplegic Cases in which there is a marked mental element are also unfavorable, as well as those presenting decided vascular or cardiac changes

Very frequently, however, the progress is influenced by extraneous elements, such as the environment and, above all, litigation There are many things connected with litigation that have a decided influence on the patient's mind, such as the frequent examinations of physicians, the solicitous inquiries and advice of friends, the consultations of lawyers the dread of the court, the desire for a financial award and anxiety as to the outcome,

2 Cases 3 and 4 might be classed as simple hysteria

perhaps a sense of injustice done them that their demand for damages is not readily granted and the like Such influences tend increasingly to fix the patient's mind on his impaired health and to produce all the ill effects of suggestion, while the natural result of the anxiety and other depressing conditions is steadily to lessen his nervous force and to impair his general health For all these reasons litigation usually retards the favorable progress of the disease or leads to a change for the worse It is a common experience that the physician can do little or nothing for his patient until litigation is over, and this is the more unfortunate because prolongation of the course of a nervous case often adds greatly to the difficulties of a cure Perhaps the strongest proof of the influence of litigation in traumatic neurosis is the fact that in various countries cases of the disease appear to increase according to the success of litigation The disease has even been attributed to litigation That the latter is, in general, a false view I need not state My own interpretation of the apparent proportion of cases to the frequency of litigation is that the latter tends to increase and to prolong the disease in the given case which otherwise would frequently have escaped attention

TREATMENT

The treatment of traumatic neurosis is, practically, that of hysteria and neurasthenia, and into that subject I need not enter But I wish to consider some special questions which especially arise in the management of these cases

In a symposium on traumatic neurosis at the 1900 session of the American Medical Association A. D Bevan said that the medical attendant, more than any other factor, is responsible for the development and continuance of traumatic neurosis, and claimed that he had nipped such cases in the bud by what he, not inaptly, termed, brutal treatment, telling his patients nothing ailed them, forcibly putting them on their feet and compelling them to walk, and the like While, in the main, I do not agree with his views, yet there are some practical and important lessons suggested by his severe strictures

It is generally believed to day that the main element in the production of this nervous disease is mental shock, and as a mental state lights up the disease it is scarcely to be doubted that other mental states have a powerful influence on either increasing and prolonging it on the one hand, or lessening or removing it on the other, hence the immediate and decided effect of the physician and the environment. If the acts and words of the physician and the environment are such as to cheer the patient to inspire him with hope, to make him believe he will soon recover, all nervous symptoms may soon disappear, or at least be favorably influenced If on the other hand the diagnosis of the physician suggests to him serious disease and in addition, the idea of litigation is thrust on him his symptoms may increase and be indefinitely prolonged

Let me speak briefly of a patient who has just left my hands

History—A man with hysterical antecedents, received an injury to his head evidently a slight one but probably followed by a fright He fainted and according to his physician's account was thereafter extremely emotional complained of severe pain in his head and was at times in a state of mental confusion

He was sent to me ten days after he was hurt with the statement that it was uncertain whether he had serious injury to his brain or not He complained bitterly when I saw him, and he had, besides, a degree of left hemiplegia and left hemianesthesia He stated that the latter, that is, a sense of numbness and weakness in the left side, came on the second or third day after the injury He had, in the meantime been among anxious relatives and friends He was immediately removed from all such influences, and his further treatment consisted chiefly of encouragement and suggestion, with the assurance that he would soon be well Before many days he returned to his home apparently in perfect health One can scarcely doubt that with suitable cultivation of the symptoms, especially if litigation had been added, chronic invalidism might have ensued in which respect the case is probably typical of much that does occur

Do not misunderstand me This was a mild case and, therefore, such a rapid disappearance of symptoms was possible Had it been a severe one the result might have been different, at least so speedy a recovery could not have been expected

But, nevertheless, the case serves as a text to my sermon, that the physician should constantly bear in mind the great influence of mental impressions on functional nervous disease, especially in a case of this kind The physician should aim to remove the patient from depressing environment, particularly from among emotional and anxious friends, he should avoid saying anything unfavorable as to the outcome, but rather should give the most cheerful, hopeful outlook possible, and, above all, he should remember the disastrous effect of litigation and if justice to the patient demands a lawsuit the latter should be kept in the background of the patient's consciousness so far as possible.

I wish to direct attention to only one other measure in treatment, and that is work Oppenheim's statement that in mild cases work is sometimes curative, but in severe cases the patients should do little or no work, I think must be accepted as true It would be fortunate, indeed, if when needed, work could more easily be found apportioned to the patient's working capacity It is often thought that early return to work is a sure means of restoring health Oppenheim says that too early resumption of work is an unfavorable factor in prognosis

While writing this paper I saw a woman who suffered rather a severe injury eleven years ago, which was followed by nervous symptoms Need compelled her to go to work—she is a saleswoman—soon after the injury She is now suffering much as she did when I saw her nine years ago, and she attributes this to the fact that she had to return to work so soon, an opinion that is probably correct There are many cases like hers, that is, people who are at work but still sufferers, and who yet are looked on by the world as in good health

It would be interesting to know of the cases on which Bevan based his opinion of the value of 'brutal treatment,' how many of the patients are really well and how many have been injured by the treatment

In deciding the question of work we should be guided by the character and needs of the case In treating functional nervous diseases it is well to be guarded against extreme views such as that rest treatment is always needed or that work is the only cure A degree of rest is probably always indicated in nervous cases and complete rest in some instances but by no means in all On the other hand, diversion is usually essential that is something that will take the patient away from morbid thought from self-absorption and from the possibility of auto-suggestion For the [illegible] recreation amusements [illegible] work Work counts especially [illegible] resources within him [illegible]

ested in other things, and may be especially of value in traumatic neurosis through taking the thoughts away from litigation

In deciding this question in a given case we should judge first of the strength of the patient by observing the effect of exercise on his pulse and breathing, often we shall be influenced by whether work is the one diversion that is effective in his case, and sometimes we are controlled by the patient's financial needs which may compel him to resume work sooner than his condition justifies

Clinical Notes

ACCIDENTAL INOCULATION WITH THE VIRUS OF PLAGUE

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MANILA, P I

Last fall, as the unfortunate result of the accidental contamination of the cholera vaccine with a culture of plague bacilli, a number of natives were inoculated with plague and several died The occurrence makes of interest the following account of the work with the cholera vaccine

For the last three years Dr Richard P Strong of this bureau has been working on a cholera vaccine which consisted of an extract of the killed, digested and filtered organisms, later modified to a mixture of such an extract with one obtained by shaking on a shaking machine the living organisms in distilled water and then filtering Obviously this product is always carefully tested and is absolutely sterile and the health department has used on about seven thousand persons in the Philippines One-half of the prisoners in the government prison at Bilibid were vaccinated with this vaccine and one-half unvaccinated The same was done in a number of villages in the surrounding territory Needless to state, no bad results followed from these vaccinations There is a moderate general reaction following the inoculation, but the local reaction is very slight The reaction from vaccination with this cholera vaccine is not as serious as that which frequently follows the smallpox vaccination, yet a high blood immunity results

Subsequent experiments in the town of Angat, where one thousand and seventy-eight persons were vaccinated showed that after vaccination there were one hundred and twenty-two cases of cholera, one hundred and twenty-one of which were among the unvaccinated and only one among the ones vaccinated In the prison we had no further epidemic of cholera after the vaccination, but no conclusions can be drawn because the cholera was stopped by sanitary measures It may be stated, however, that since the vaccination we have had twenty cases of cholera, eighteen of which were among the unvaccinated and two among the ones vaccinated

Dr Strong continued his work on immunity against cholera by vaccination, as he was convinced that this means was one which would aid in the prevention of large epidemics in the future since it is known that apparently healthy people frequently carry about in their intestines cholera spirilla, which are passed in the stools and hence quarantine and sanitary measures can not always be considered effective safeguards against a cholera epidemic Certainly the end sought for is a great one and the results satisfactory

Last year, in a medical congress at Berlin, the method of vaccination by means of the entire organism and not by its extracts was advocated Haffkine has urged the use of the living organism and believes that by its use a higher immunity can be obtained Dr Strong, of necessity to complete his argument, needed to make some vaccinations by this method, as he was convinced it was not superior to the one generally employed by this laboratory, but, obviously, with such arguments in literature, others would come forward attacking his results In employing the living organism it is necessary to use a 24-hour old culture owing to the fact that after this time changes take place in the culture owing to the formation of ferments, death of a large number of bacteria, etc, and consequently, while the method allows of every test as regards the purity of the cultures up to 24 hours before their use, after this time (when many cultures are employed) no satisfactory test of its purity can be made and no test on animals can be carried on, since the cultures must be inoculated 24 hours after their preparation Inoculations had been carried on in Bilibid several days without accident On the day of the misfortune twenty-four men were inoculated, but this was not compulsory The history of this vaccination is about as follows

The culture was carefully carried out and identified, and was known to be a pure culture of the cholera organism up to 24 hours before the time when the vaccination was made A large number of tubes of cholera media were inoculated from these pure cultures and placed in the incubator On the following morning the cultures were each suspended in one cubic centimeter of saline solution, the whole mixed, and inoculations, as was necessary, made immediately after the preparation of the suspension It is supposed that some one placed a 48-hour virulent plague culture among the cholera cultures, the blue pencil marks which designated the culture having been erased from the glass by handling This view is supported by the fact that on the afternoon of the day of inoculation a 48-hour virulent culture was missed from the incubator It was known certainly that one of the five plague cultures prepared two days previously, as was shown by Dr Strong's note-book, had been removed from the incubator, but it was not until two days later, when he wished to examine the opsonic index of five guinea-pigs, for each one of which a 48-hour richly-grown culture had been prepared, that the plague culture was missed

It was proved by a technical committee of three physicians appointed by the governor-general to investigate the matter that a 48-hour richly-grown plague culture spread over the entire surface of the entire slant resembled some of the cholera cultures so strongly that they were unable to identify or to pick out such a plague culture by its gross appearance when it was placed among a number of the cholera cultures of the strain employed It was also shown that a hanging-drop preparation and the stained microscopic one made from the mixed suspension of all the cholera cultures contaminated with the plague one (as used for the human inoculations) did not reveal the suspicion that the fluid was contaminated with plague bacilli, since no bi-polar staining organisms were visible and evidently, the plague bacilli were in too small numbers or those present did not show any sufficiently distinctive morphology to separate them from the plemorphic cholera organisms in the saline solution Nevertheless, this same suspension, in which plague bacilli were not detected by microscopic

examination, when injected subcutaneously into guinea-pigs and a monkey, caused, after several days, death from plague infection It has not been ascertained who placed the plague culture among the cholera ones after all possible tests of the cholera culture had been made. An investigation of the entire matter was pursued by the government prosecuting attorney at our request, and later the governor-general, in order to satisfy public opinion, appointed a committee of eight, six Filipinos, one American and one Englishman, three of which committee constituted a technical committee, for investigation

While the serum division of this laboratory is also in charge of Dr Strong, and while this division prepares our regular cholera vaccine, it must be clearly understood that the regular preparation of our cholera prophylactic had absolutely no connection with this matter and that the vaccine used by Dr Strong on the day of the accident is entirely distinct from the preparation with which he is identified The method used on the last twenty-four prisoners is the one which is best known by the names of "Ferran" and "Haffkine" It is perhaps unnecessary to add that the laboratory has prepared several million units of vaccine virus and several thousand doses of plague prophylactic which have been used (in addition to the cholera prophylactic) with good results and without accident

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A NEW NASAL DRESSING

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I think it will be generally admitted that the ordinary methods of packing the nasal cavities after operation are unsatisfactory Packing with gauze is particularly so It is difficult by this method to secure sufficient pressure in the proper place to control hemorrhage efficiently By its capillarity the gauze acts as a drain, keeping up a continual oozing, which may even reach alarming proportions It is continually getting down into the pharynx causing retching and tempting the patient to remove it Its removal is painful, interferes with healing and always occasions more or less secondary hemorrhage The open method, with or without the application of collodion to the surfaces operated on, is dangerous and not to be considered as a routine measure

The Simpson tampon of compressed absorbent cotton in various sizes is a fairly satisfactory dressing but for the difficulty attendant on its introduction or removal It bends, swells rapidly on contact with the secretions of the nose, making it difficult to introduce and place properly It clings to the injured surface most tenaciously, causing severe pain and making its removal in the mass practically impossible When removed piecemeal shreds of considerable size are left adherent to the wounded surfaces and hidden away in nooks and crannies where it is almost impossible to distinguish them from the wound surfaces when they are stained with wound secretion Unless discovered and removed they keep up a constant irritation prolong the healing process and contribute to the chances of infection

To overcome these objectionable features I use the following method which it seems to me solves the problem of nasal packing after most operations

From a piece of sheet paraffin or dental wax as it is called two splints are cut, conforming in shape to the Simpson nasal tampon and about 15 mm (⅝ in) longer than the tampon and a piece is cut from a second tampon to fill in the extra length The tampon is now placed between the two strips of paraffin, to which it is cemented by means of aristol-collodion Any thickness desired may be had by varying the thickness of the Simpson tampon, either by splitting them or by using the different thicknesses in which they come The completed tampon is now pushed into place a procedure which is facilitated by the smooth waxy surfaces of the splints Once in position the cotton rapidly absorbs moisture from the adjacent mucous membrane and, swelling, forces the paraffin plates against the septum and the outer wall of the nasal cavity Under the influence of the body temperature the paraffin becomes pliable and is thus molded into accurate apposition with the wound surfaces, controlling hemorrhage and making an ideal non-irritating, protective dressing When the time comes for its removal, which should be at the end of 48 hours the tampon can be removed *en masse* easily and painlessly, there being absolutely no adhesion between the paraffin plates and the wound surfaces Their greasy smooth surfaces offer no resistance to removal and they slip out without pain, hemorrhage or other inconvenience

A spur or ridge of the septum may be removed coincident with the removal of a turbinate, without the slightest danger of synechia, if this dressing is used and a single plate of the paraffin replaced after the removal of the tampon and worn until healing is complete

In submucous resection of the septum it is an excellent dressing Using a tampon in each nostril, any degree of firm equable pressure may be obtained and maintained as long as desirable and they may be changed as often as desired without disturbance of the parts

By placing the Simpson tampons in a letter press or between heavy weights to prevent their expanding they may be impregnated with alcoholic solutions of aristol, iodoform or other antiseptics and allowed to dry before being placed between the paraffin plates which also may be kept in an antiseptic solution thus making an antiseptic as well as aseptic dressing

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A METHOD FOR THE RAPID DIAGNOSIS OF DIPHTHERIA BY THE GENERAL PRACTITIONER *

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The necessity for the early diagnosis of diphtheria is often painfully apparent to the general practitioner as failure in that regard too often results in involvement of the larynx especially in children while this in turn frequently ends in the early demise of the child I therefore offer this method to the profession with the hope that it may facilitate the diagnosis of this disease

It is necessary first to obtain a culture from the throat or nose of the patient by means of a swab of absorbent cotton or the platinum needle A swab which is very convenient for this purpose may be made as follows An ordinary test tube is sterilized in the Bunsen or alcohol flame A wire is bent with a loop at both ends and made just long enough to fit the tube One end of this wire is then wound with wadding in the form of a convenient sized swab the other end is wound with similar wadding so as to fit the top of the tube as a stopper similar to the cotton stopper of the ordinary culture tube The whole swab is then sterilized in the flame and placed within the tube and is then ready for use The

* Read before the Sangamon County (Ill) [illegible] 1907

tube may be carried in the overcoat pocket and used in any suspected case Its chief advantage is that it may be used repeatedly, sterilizing it each time in a flame I am indebted to Dr Wright of the staff of the Calumet and Hecla Mining Company's Hospital for this method of preparing a universal swab, and wish to pass it on to others for what it is worth

The next step in the process is to obtain some Loeffler's blood serum tube slants, these can be obtained from any of the reputable pharmaceutical houses and may be kept on hand for a reasonable length of time without contamination. They may be kept at the office or one may be carried in the pocket, as necessity demands

The swab is rubbed over the suspected area of nasal mucous membrane, or tonsil or pharynx, and a smear made at once on an ordinary cover glass or glass slide The serum slant is inoculated by passing the swab gently over its surface, and the swab is then sterilized in a blue flame and replaced in its tube for future use

The inoculated serum tube must be incubated for 12 hours, this can be easily done in the following manner The tube is slipped in the inside vest pocket and kept next the body for twelve hours, the physician acting as his own incubator At the expiration of that length of time if the diphtheria bacillus be present there will appear a yellowish white glazy growth, with white colonies here and there, showing irregular edges and smooth surfaces Smears from this culture are examined microscopically, the staining being done with Loeffler's alkaline methylene blue stain If the characteristic bacilli with their long beaded threads, clubbed ends and irregular sized dots are found the clinical diagnosis of diphtheria is corroborated.

McFarland says "Very few other germs found in the throat will produce so rapid a growth on this culture media" This I have found to be true, perhaps with one exception, and that is some varieties of the streptococcus, these, however, may be differentiated by the characteristic dew-drop appearance of the culture on the serum slant when it first appears, and the chain-like structure of the coccus under the microscope While waiting for the growth to develop the smears made directly from the throat may be examined microscopically and if suspicious bacilli are found it will help to confirm the diagnosis

The advantages of this method are the necessity of waiting from 24 to 48 hours or even more is obviated

The general practitioner becomes expert in identification of the diphtheria bacillus

The practitioner may also keep a check on his diagnosis by sending specimens to the state laboratory for diagnosis

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IMPROVED FRACTURE APPARATUS

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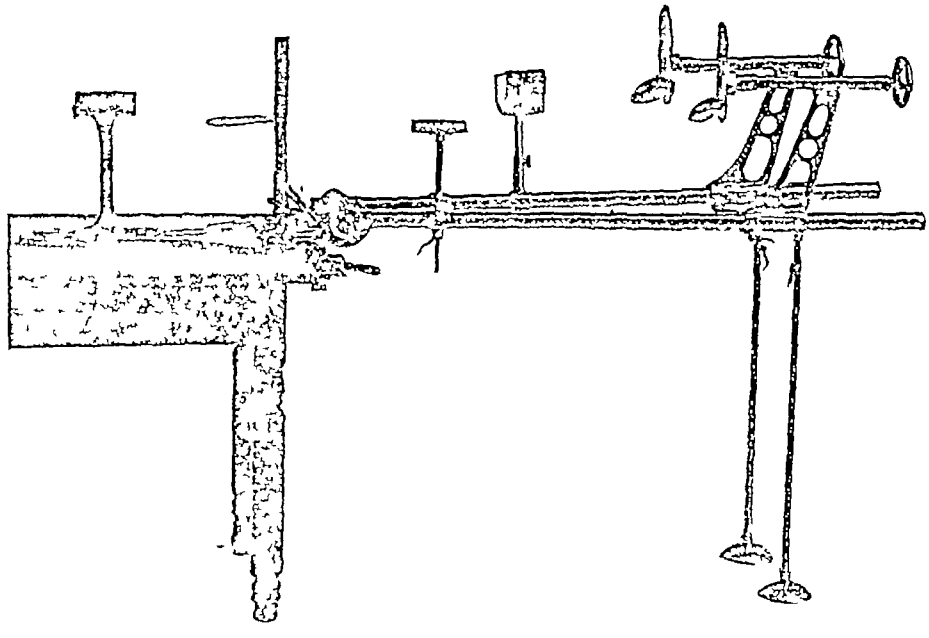
The apparatus here shown is the result of combined effort on the part of Dr Frederick T Mueller of Chicago and myself, with the assistance of Mr S George Hubbell of Milwaukee, a mechanical expert, who carried our ideas into effect. The purpose of the machine is to enable the surgeon to reduce a fracture of any of the long bones of the lower extremity and hold the fractured ends in apposition while a permanent set is made by a plaster cast It is used also in various orthopedic operations

To facilitate the reduction of fractures the patient is placed in a horizontal position on the machine, the feet being separately fastened to the foot rests on the ends of



the long rods, the sacrum resting on the horizontal plate supported on the vertical post, which latter comes between the legs and touches the pubic arch The shoulders of the patient rest on the support at the free end of the main frame, which is attached to the table, while the head rests on a box or on pillows placed on the table

The two upright supports seen on the horizontal rods are to support on one side the sound knee and on the other the site of fracture so as to prevent backward bowing, the extremities being kept in even planes In order to facilitate adjustment of fragments and to overcome distortion of proximal fragments such as occur in fractures of the upper third of the femur, the two long rods may be adjusted to any angle the human leg can be placed in These rods are attached by their proximal ends to the main frame of the apparatus by friction-discs, which permit of universal joint movement

The extension of the legs is made by screws attached to the hand wheels seen on the foot brackets These screws pull the body toward the foot rests until the pubic bone impinges firmly against the vertical post in front of the horizontal plate on which the sacrum rests Ad-

ditional extension can be made on either leg as desired until the bones are accurately adjusted It will be seen that no movement of the fragments is possible after being once adjusted until the screw pressure is released

The plate for supporting the site of the fracture may be tilted by means of a hub on the fixture so that in supracondylar fractures of the femur relaxation of the gastrocnemius muscle may be effected and the leg brought to the double inclined plane position by elevating the supporting plate by means of the small hand wheel which turns on the threaded vertical portion The horizontal rods may be raised or lowered from the horizontal plane and abducted or adducted, or these movements may be combined The foot brackets slide on the horizontal rods so that the machine is quickly adjusted to fit a large or small person

These machines are manufactured by The Badger Appliance Company of Milwaukee, Wis

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HOLES IN THE MESENTERY WITH HERNIATION OF THE INTESTINE

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These anatomic curiosities, due to defect of development or subsequent alteration in structure, seem to attract little attention, nevertheless, they are of scientific interest Holes in the mesentery are apparently of great infrequency and with few exceptions no references to them are found in the literature nor attempts to explain their origin In the mesogastrium (the omentum) they are not infrequent It is probable that the same conditions which cause them in the omentum lead to their formation in the mesentery They are seldom found in the upper part, the nearer the cecum the more numerous and the larger they become Traumatism with laceration, the breaking down of caseous glands, and emptying of serous or chylous cysts may give origin to them, but the most frequent situation for their location being proximal to the cecum, suggests defective arterial supply and gradual absorption as the more logical explanation for their existence Anastomosis of the ileocolic branch of the mesenteric artery, with the intestinal branches, is sometimes so incomplete that it is often impossible to inject this area These holes in the mesentery, when due to laceration, are jagged and irregular, but when due to gradual absorption of the constituents of the tissue the edges are even rounded and not cicatricial Through these foramina herniations of gut may occur causing strangulation

Case 1—J D, a railroad hand aged about 45, was seen at the Bayonne Hospital through the courtesy of Drs Sexsmith and Abbott

History—The man had been ill three days with symptoms of appendicitis, temperature was 102 F, pulse over 100 There was general abdominal tenderness focusing at the cecum the abdomen was hard and tympanitic The man vomited contents of the stomach and upper intestine. The general condition was bad

Operation—An incision was made through the sheath of the right rectus General peritonitis was present as evidenced by seropus and flakes of lymph between the intestinal coils In the cecal region a hole was discovered in the mesentery at the terminal end of the ileum, close to the cecum with smooth margins and regular outline about two inches in diameter Through this, from above passed a coil of small intestine for a distance of over two inches It was not adherent to the margins of the hole but was held in place by the tip of an ascending gangrenous appendix In other words there was intraperitoneal herniation of a knuckle of gut through the hole, the herniated portion being held in position by agglutination to the tip of the appendix, the appendicitis was subsequent to the former condition

Case 2—E E, aged 10, entered Christ Hospital, Jersey City, Jan 5, 1907, and was seen through the courtesy of Dr Franklyn

History—For five days the patient had had obstipation with tympany, but no rise in temperature There had also been colic and green vomit The condition was bad. Examination proved negative

Operation—The abdomen was opened through the sheath of the right rectus There was a considerable quantity of intraperitoneal fluid The coils of small intestine were much injected and roughened but there was no lymph deposit Meckel s diverticulum was pear shaped, with a two inch pedicle, three eighths of an inch in diameter and very firm, there was also a cyst like enlargement at the periphery one and one half inches in length The diverticulum looped over and herniated through a small hole one-quarter of an inch in diameter, in the base of its own mesentery, on a direct line with its origin The cyst like expansion protruded on the side distal to the loop and was anchored by its enlargement Through this loop several inches of small intestine were herniated proximal to the origin of the diverticulum The hole in the mesentery was stretched by artery forceps, the diverticulum was withdrawn and, including the loop of intestine, liberated

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SOME OBSTETRIC EXPERIENCES IN CHINA

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There is no way of estimating the mortality from childbirth in China, but it must be very large Ignorant midwives attend most of the cases A physician is rarely sent for, and when he comes so far as I can learn, he is not supposed to examine the patient but merely feels her pulse and writes a prescription for the particular complication from which she is suffering A woman in labor is considered unclean, and ordinarily a Chinese doctor would not be willing to pollute himself by coming in contact with the discharges from a labor case Among the higher classes, especially the relatives of a puerperal woman will not come into her room until a month after her delivery She is taken care of by midwives and female servants The result of such neglect can easily be imagined

PLACENTA PREVIA

One of the first obstetric cases I saw after coming to China was a case of placenta previa at about the sixth month The patient had been having pains for several days and on examination I found the os dilated to two inches in diameter and the placenta presenting Miscarriage was apparently inevitable At that time I had no hospital or room of any kind in which I could put an in patient As the woman had come from a distance I advised her to rent a room near by and let me attend her As she was suffering a good deal of pain I gave her a hypodermic injection of morphin and then she and her husband got on their boat he promising to come for me as soon as he succeeded in renting a room I did not see them again for two days when they both appeared at the dispensary and informed me that the miscarriage had taken place shortly after she got on the boat The woman said she was feeling all right and they insisted on going back home The were loud in their praises of my skill [illegible] as the morphin had relieved her pain almost immediately and as he thought I had brought on labor which was painless At the time I saw her there was very little hemorrhage though as I recollect he gave the history of having had severe hemorrhage [illegible] time before I saw her This woman made a good recovery though after she returned home she had an attack of fever, which they said was malaria

TRANSVERSE PRESENTATION

Another one of my earliest cases was a transverse presentation with prolapse of the arm After a good deal of manipulation I succeeded in pushing up the arm and changing the position to a vertex Then I applied the ordinary McLane forceps at the superior strait and delivered without any particular difficulty The child was a large, healthy boy The woman appeared to have an irregularly shaped, though not contracted pelvis She gave the history of having borne one child previously, which also presented transversely, the attending midwife had delivered the child in sections, probably beginning by pulling off the arm The woman has not borne any children since

ECLAMPSIA

One morning early I was called to see a patient who had been brought to the door on a boat She was in a deep stupor and could not be aroused It was evidently a case of eclampsia Labor pains had ceased and the os was dilated enough to admit two fingers The patient's friends and family were extremely anxious for her to be delivered as quickly as possible, even if the child had to be mutilated. That is, they insisted that I act in the interest of the woman, without regard to the child The patient was a primipara and the child seemed to be large, so I felt that haste was necessary if the woman's life was to be saved After dilating the cervix as much as I could with my fingers I reluctantly proceeded to do a craniotomy As soon as the child was delivered, the people said that they had to go I urged them to stay and let me do what I could for the woman, who was still in a stupor, but they insisted on leaving, as they had hired out their boat for a trip that day and would lose the money if they did not appear on time. I managed to pour a large dose of magnesium sulphate down the woman's throat at the imminent risk of strangling her, and then they left Some days afterward they came back and reported that the woman was entirely well, and they seemed very grateful for what I had done

Some months after this I was called to see another case of eclampsia, this time in a multipara This woman also was a deep stupor Labor had not begun but as she had a roomy vagina and pelvis, I found no particular difficulty in performing manual dilatation of the os and delivering immediately with forceps The child was alive and healthy, but, in spite of all I could do, the mother continued in her unconscious condition and finally died

CRANIOTOMY

One day I was called to see a case of difficult labor several miles out in the country As the messenger who came for me said that the child's head was visible I did not take my craniotomy instruments with me When I reached the patient I found a case of contracted pelvis with the child's head above the brim The fetal heart was very slow and barely audible What they had taken to be the child's head I do not know, unless it was the swollen and discolored external genitals or possibly a blood clot I was in a quandary However, after soaking my penknife in a carbolic solution for a while I succeeded in perforating the head with it Then by using my McLane forceps as a cranioclast, I reduced the size of the head enough to accomplish the delivery The patient made an uneventful recovery, and I have seen her a number of times since

PODALIC VERSION

A little over two years ago I was called to see the most difficult obstetric case that it has ever been my lot to attend The patient lived about 5 miles out in the country I was called at night and my Chinese assistant and I went in a boat We found the patient in a straw thatched hovel with a dirt floor, lying in a dark corner on a pile of straw It was a transverse presentation and the child's arm had been broken by the midwife's efforts at delivery The patient was in an exhausted condition her lips were parched and dry and her pulse was 120 The doubled up chest of the child was jammed down into the pelvis and the arm was prolapsed the uterus was contracted so firmly on the rest of the child's body that it was impossible to push the prolapsed arm or the chest up above the brim I had no bone forceps with which to cut the ribs and cause the chest to collapse, so the alternatives left to me seemed to be decapitation and podalic version, both of them about as difficult and dangerous under the circumstances as one could well imagine I have never had any leaning toward decapitation The thought of a trunkless head inside of a firmly contracted uterus is not, to my mind, a particularly enviable condition to treat. Podalic version, if it were possible, seemed to offer the best chances of a quick delivery, which was the great desideratum, considering the condition of the patient I decided that the danger of rupturing the uterus or otherwise injuring the soft parts by manipulation was more than overbalanced by the greater danger of leaving the woman undelivered, so I determined to use a good deal of force, if necessary To get my hand and arm past the child's doubled up chest as it lay in the pelvis seemed a physical impossibility, and so I thought it was going to be when I first tried it Gradually, however, I worked my arm up in spite of the great pressure until my fingers came in contact with the child's feet When I tried to grasp a foot I found that I could not, as my fingers were numb from the pressure I tried again and again without the slightest success As the numbness was increasing, there was nothing to do but to withdraw my arm After waiting a while, I tried again About this time my assistant informed me that the patient's pulse had increased to 140, so feeling that I must not lose any time, I made a desperate effort and succeeded in grasping a foot firmly enough to exert a little traction Then I got a better hold and exerted more traction, and as a result the mass that had seemed hopelessly wedged in the pelvis began to move upward It was not long before I had a foot out, and of course the rest was easy I was surprised at the marked effect of moderate traction on the foot in making the impacted chest go back into the uterus, in spite of the fact that the uterus was in a state of tonic contraction This patient also made an uneventful recovery

DELIVERY OF MORIBUND PATIENT

A little more than a year ago I saw a case of twins that illustrates the influence of Chinese superstition on foreign medical practice One child had been born the day before I was called and was living The second child, much the larger of the two, was still in the uterus It was evident from the degree of maceration and the odor that the child had been dead for some time As the mother was almost moribund, I told them that I did not care to undertake the case I told them that the patient would probably die during delivery or soon after They replied that they realized the woman's desperate condition, but that they wanted her delivered, living or dead Their extreme anxiety to have her delivered was due to a belief of the Chinese that a pregnant woman who dies undelivered is doomed to continue carrying the child in the next world After receiving their assurance that I would be free from responsibility for the death of the woman, I proceeded to remove the putrid fetus Labor pains had ceased entirely and the breech was presenting On account of the large size of the fetal head and the rigidity of the maternal tissues, I had to apply forceps to the after coming head. The patient died a few hours after delivery

UTERINE INERTIA.

Chinese women seem to be subject to uterine inertia It is not surprising that this should be the case in women of the higher classes who have bound feet and who take practically no exercise but I have been struck with its frequency even in hard working women with natural feet Often after the os is half dilated the pains become feeble and ineffectual and the labor drags on hour after hour, making scarcely any progress Making these patients walk around or giving them quinin seems to have very little effect In a great many cases, however, rupturing the membranes early (i e, when the os is about half dilated) seems to have a remarkable effect in stimulating the pains I have done this so often lately and with such uniformly good results that the conviction is constantly being strengthened in my mind that after the os is dilated to about two inches in diameter, the "bag of waters" rarely serves any useful purpose and often makes the pains ineffectual

Recently I attended a multipara with marked uterine inertia The os was dilated to about two inches and she seemed

to be making no progress The pains were very feeble and seemed to have scarcely any effect on the dilatation I ruptured the membranes, and the pains increased enough to dilate the os to about three inches, and then there was no further progress The pelvis was roomy, the child's head was small and there was no rigidity of the cervix, but still the head refused to descend I applied the forceps and, though the traction used was very slight, the head came down without the least difficulty and delivery was soon accomplished I think I have never used such a small amount of traction in a forceps delivery

Though my obstetric practice is not large there is a steady increase, which shows that the Chinese here are beginning to realize the value of foreign methods in this branch of medicine In looking over my records I find that in about ten years of hospital work here there have been 14 forceps deliveries, 4 craniotomies, 2 transverse presentations, 1 cephalic version, 1 podalic version and 1 premature labor for hyperemesis gravidarum

During 1906 I had 12 cases, more than in any previous year Several were in wealthy, influential families

China is making rapid strides toward civilization, and Western medical science is destined to be an important factor in the process A large number of medical books have been translated into Chinese by medical missionaries and more are constantly being translated There are several medical schools in China and we hope to see a medical magazine in Chinese established at no very distant date

LIGATION OF THE BLEEDING VESSEL IN THE HEMORRHAGE FROM DUODENAL ULCER

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PITTSBURG, PA

In view of the present diversity of opinion concerning the advisability of direct ligation of the bleeding vessel in ulcer of the stomach and duodenum, the following case is reported

Patient—Mrs F, aged 26, was seen in consultation with Dr W N Humphrey, Oct. 8, 1906

History—She had been married eleven years and had had one miscarriage at third month, no children Her general health was good until three years ago, when pain began in the right side of the chest radiating to the back It was more or less constant and always greater after eating Some foods caused more distress than others There was vomiting at irregular intervals, and she was usually worse before the menstrual periods The patient never vomited blood until Oct. 2, 1906, when a very severe hemorrhage occurred. This was quickly followed by a second and third attack on the same day On October 3 another severe hemorrhage occurred and a large quantity of blood was passed from the bowels. No further bleeding from the stomach occurred until October 8, although blood continued to be present in the bowel movements during this interval In the afternoon of October 8 another hemorrhage occurred At this time I was called and found the patient's condition to be critical, as denoted by a rapid pulse and extreme pallor All treatment, medicinal and [illegible] having been administered without any effect on the hemorrhage operation was advised Early the following morning before being removed to the hospital, another hemorrhage occurred, leaving her in such serious condition that the ambulance surgeon feared to convey her to the hospital The picture presented on admission was one seen in cases of extreme hemorrhage. Pulse weak and rapid extremities cold [illegible] The continuation of medicinal treatment seemed unwise. For the following twenty four hours the [illegible] was stimulated and given injections of normal salt solution. At the end of this time her condition was somewhat improved, and in view of the persistently recurring hemorrhage, ligation of the bleeding vessel seemed the only safe treatment.

Operation—On October 10, under light ether anesthesia administered by Dr Stuart, an incision was made in the median line Careful examination of the external surface of the stomach and duodenum failed to reveal the location of the ulcer The stomach was then opened by an incision through the anterior wall at the pyloric end An ulcer was found in the duodenum just below the pyloric ring It was of the mucous variety and was situated so close to the ring that external palpation did not reveal its location The ulcer was transfixed and ligated with catgut and the peritoneal surface reinforced by mattress sutures The opening into the stomach was closed and a posterior gastroenterostomy with no loop was performed It was necessary to administer considerable stimulation throughout the operation, but the patient rallied well and made a good recovery There has been no further hemorrhage and she is now free from pain and eats everything without distress

The diagnosis as to the definite location of the ulcer was uncertain While large quantities of blood coming through the bowel and the peculiar location of pain seemed to point to an ulcer of the duodenum, yet it seemed somewhat doubtful that such large quantities of fresh blood would pass backward so quickly into the stomach It was evident, however, that it was located near the pylorus The indications for treatment remained the same in either case

A CONVENIENT METHOD OF OBTAINING CLUMP-FREE EMULSION FOR OPSONIC WORK

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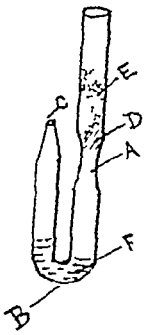
While studying the specificity of opsonins last summer in Professor Wright's laboratory I sought for a method of quickly separating organisms from the liquid in which they are suspended, centrifugating alone requiring from thirty minutes to one hour The following device was used with splendid success A constriction (A) is made in a piece of small-caliber glass tubing the tubing is then bent on itself (B), terminating in an opening (C) Moist filter paper fiber (D) (conveniently made by scraping filter paper with the edge of a knife) is placed against the constriction and packed firmly Into the long arm is placed the liquid (E) to be filtered and the device is placed in the centrifuge



Working with staphylococci, I obtained practically bacteria-free filtrates (F) in ten to fifteen minutes from thick suspensions of staphylococci in normal sera The filtrates showed scarcely any opsonin, and stained specimens practically no organisms Similar [illegible] ugo-filtration of tubercle bacilli required but [illegible] minutes, since the fiber need not be packed [illegible]

The device, however has a more practical [illegible] When a bacterial emulsion presents many [illegible] resist ordinary mechanical means of [illegible] free filtrate may be obtained by the [illegible] a few opsonic work in twenty or thirty [illegible] turns of the centrifuge If [illegible] contains clumps it is easily [illegible] I find troducing a capillary pipette [illegible] that repeated filtration [illegible] more certain than a single [illegible] packed fiber since in the [illegible] is likely to be too thin [illegible] accomplished in [illegible]

AN IMPROVED TRACTION SHOE

JOHN JOSEPH NUTT, B.L, M.D
Clinical Instructor in Orthopedic Surgery, Cornell University Medical College Assistant Surgeon to the New York State Hospital for Crippled and Deformed Children
NEW YORK CITY

The successful treatment of Shaffer's foot, invariably, and of flatfoot, frequently, depends on the elongation of the gastrocnemius muscle Compensation in the former condition, by means of a higher heeled shoe, and splinting the deformed foot with steel arches, in the latter condition, are measures which generally give relief, but of themselves are not curative

An active foot, with limitation of dorsal flexion, must suffer from the alteration of its mechanics The changed disposition of the superincumbent weight and the abnormal points of resistance due to the restricted movements of the lever-arms, must, inevitably, cause such disturbances as result from pressure, i e, corns, bunions, callosities, "ingrowing toe-nails" and Morton's toe and an alteration, or a tendency to an alteration, in the relations of the tarsal bones Whether the foot becomes what is known as flat, or presents a higher arch than formerly, depends on the amount of limitation of dorsal flexion and on the strength of the plantar tissues which serve to maintain the normal medio-tarsal joint

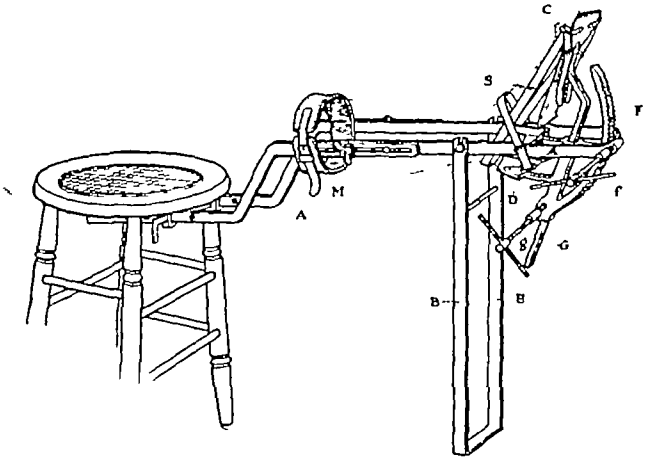


Figure 1

Every examination of an extremity should include an examination of all its joints Examination of the ankle joint will often determine the cause of a thigh, leg or knee pain which, erroneously, has been considered rheumatic, neuralgic or neuritic A painful flatfoot having a shortened gastrocnemius may often be relieved by restoring normal movement to the ankle joint, even without any further attempt at restoring the arch When a neglected Shaffer's foot has resulted in a flatfoot an artificial arch alone can not be expected to cure The prolonged use of steel arches is seldom necessary and must be productive of atrophy of the small muscles, ligaments and fasciæ of the foot

The apparatus in general use for stretching the posttibial muscles is the traction shoe devised by Dr Shaffer and presented to the profession about twenty-five years ago With this machine any desired force can be applied From a therapeutic standpoint it is unqualifiedly successful The force is the resultant of two forces, one applied in an antero-posterior direction through a strap passing behind the heel and called the heel-strap, and the other a force applied through a strap passing over the neck of the astragalus and called the astragalar strap This resultant pulls the calcaneum downward and forward in an arch whose radii are from a center passing through the astragalus just below the external malleolus, the traverse axis of the ankle joint In very resistant cases, however, the force exerted by the astragalar strap is such as to cause considerable discomfort

In the apparatus presented herewith the astragalar strap is not brought into use until the gastrocnemius is well stretched, and then a momentary hyperextension is obtained by the use of an antero-posterior ratchet exactly similar to the one in Shaffer's shoe

The machine consists of two lateral bars, a stand and a foot-piece The lateral bars A, A, are joined at their distal ends in a U shape piece Their proximal ends are bent so as to pass beneath the chair, where they are secured by a draw-pin which passes through a socket

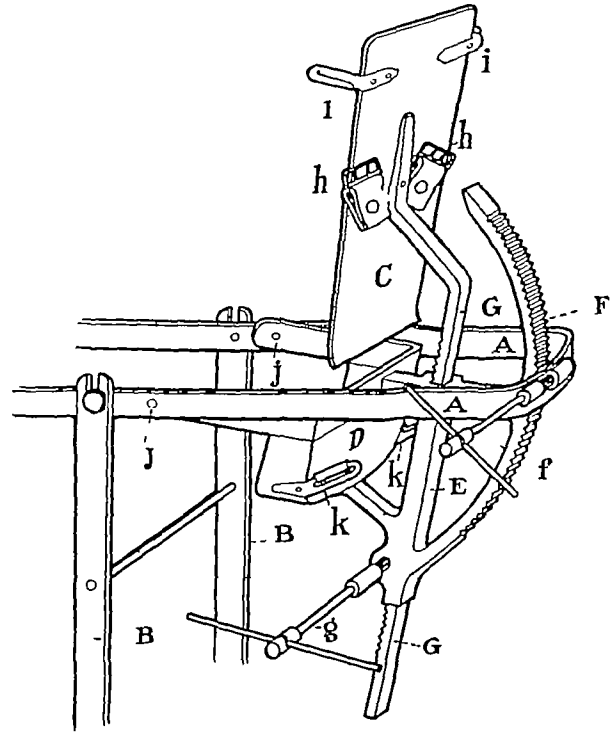


Figure 2.

screwed to the bottom of the chair-seat The continuity of these lateral bars is interrupted just below the calf-band M, and the ends, overlapping, are held by thumb screws Thus these bars may be shortened or lengthened as desired The stand B, B supports the machine It is detachable The foot-piece consists of a foot-plate C and a heel-cup D The foot-plate is joined to the heel-cup through the ratchet bar G, passing through the sheath E, which is secured to the bottom of the heel-cup The entire foot-piece is riveted to the lateral bars at j, j, and by means of the ratchet F can be moved about the axis passing through j j The arc of the ratchet F is constructed on the radius jF

To the bottom of the foot-plate are riveted two buckles h h which secure the heel-strap This strap passes behind the heel, forward on both sides of the foot over the hangers i i, projecting upward from the front of the foot-plate and backward to the buckles On each side of the heel-cup are pulleys, k k through which the astragalar S is roven The strap crosses over the ankle opposite the head of the astragalus, from one pulley to the other and is doubled back and one end passed through the buckle sewed to the other end

The method of application is as follows The patient is seated in the chair, the heel placed in the heel-cup D, and the lateral bars A, A are adjusted by means of the thumb screws to the exact length of the limb with the leg fully extended It is necessary that the axis of the ankle joint should pass through the axis of rotation of the foot-piece J, J The heel-strap assists greatly in obtaining the alignment of these two axes While fitting the apparatus the foot-piece should be plantar flexed to an angle affording an easy position for the foot The last thing to be done is to fasten the strap of the calf band This prevents the patient flexing the knee as the strain comes on the gastrocnemius

Traction may now be started Using the key f, the ratchet F is made to pass forward and around the axis J, J Everything on that foot-piece will move through arcs whose radii extend from the common center The foot is thus moved forcibly, about the ankle joint When the tautness of the tendo-Achilles, as ascertained by palpation and the sensation of the patient, warns one that full flexion is obtained, the astragalar strap is applied and a momentary hyperextension produced by means of the antero-posterior ratchet G Those familiar with Shaffer's traction shoe will recognize in this part of the treatment the copy of that shoe Furthermore, it should be mentioned that Dr Shaffer, by means of a worm and screw, also altered the angle of flexion and extension of the foot-piece

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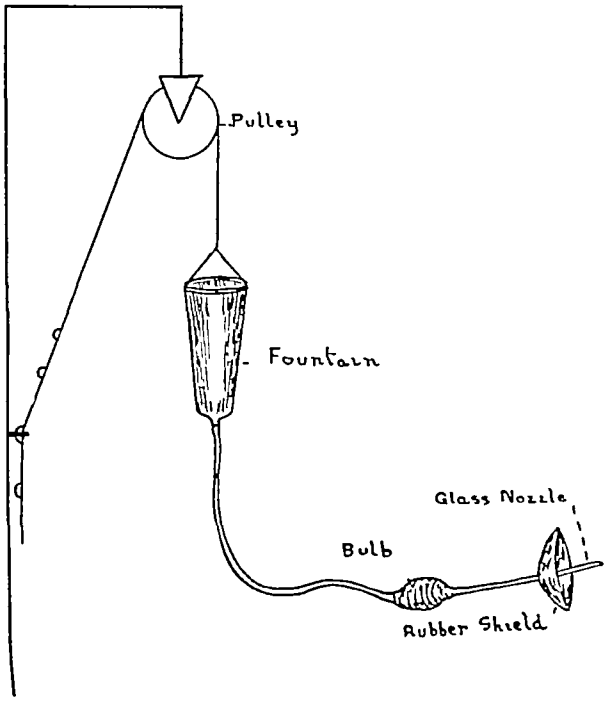
A NEW PRINCIPLE IN IRRIGATION OF THE URETHRA WITH INSTRUMENT

J H BACON, B S, M.D
PEORIA, ILL

I have been using a new principle in the treatment of gonorrhea, and the results seem to me to be good The difference between my method of treating gonorrhea and that of those who use irrigations is not medicinal but mechanical Instead of using only the force of pressure from gravity for irrigation of the urethra, I have added a bulb to the irrigation tube, and by intermittent pressing obtain an intermittent or rather a rhythmic pressure The value of this kind of pressure over simple pressure was brought to my mind by seeing the blood vessels pulsate in the thigh of one of my patients while I was irrigating and remembering that the blood will not continue to circulate if the pressure is steady It is only when the pressure is rhythmic that the blood will pass through the capillaries Now if we use Nature's method we must use rhythmic pressure in irrigating if we wish to have the fluid penetrate deeply into the lining membrane of the cavity irrigated If the urethra were a flat surface the treatment would be simple and cleanliness could easily be maintained but being an elastic tube it is more difficult to give it the very essential cleaning

I use a quart glass fountain that can be raised or lowered at will At the bottom it is connected with six feet of rubber tubing Into this tubing about one foot and a half from the distal end is fitted a valveless rubber bulb the size of an atomizer bulb A long blunt glass nozzle is attached to the distal end of the tube over which a half of a hollow rubber ball is placed in such a manner as to protect the hands of the operator from escaping fluid returning from the urethra The bulb is used without valves so that the pressure used can not rise much above the fountain head without being regurgitated into the fountain This protects the bladder from being invaded if the fountain is not raised more than two to two and one-half feet above the level of the urethra All the apparatus can be readily and cheaply set up in the office, and yet be efficient

When a patient presents himself in the early stage with a thick discharge showing the intracellular diplococci he is instructed to keep the bowels loose, drink freely of water, abstain from alcohol, coffee and spiced food avoid excesses of all kinds and get abundance of sleep Internally he is put on 15 grains of hexamethylenamine and 3 minims of oil of sandalwood three times a day Sometimes I have given Lafayette's mixture in conjunction, with hexamethylenamine with good results The urethra is irrigated four times a day with warm normal salt solution for the first week The irrigating fluid is changed to 1 5000 potassium permanganate the second week and 1 1000 silver nitrate the third week and this continued till cure is established I hold the case cured if after one weeks' intermission no gonococci are found



The irrigating fluid is heated to about 125 degrees Fahrenheit the fountain maintained at two feet above the level of the urethra and the meatus and first half inch of canal washed out after the patient has urinated The nozzle is then more firmly pressed into the urethra and the bulb pressed quickly and softly at the rate of about 80 to 90 to the minute The urethra is seen to pulsate with each compression of the bulb at the same time there is some escape of fluid around the nozzle The fluid penetrates deeply into the follicles and glands of the mucosa the nidus of the infection and one can often see little yellowish white specks of pus that are jarred loose and swept out in this pulsating stream of fluid which would have remained in place for days and maintained the infection In my experience the duration of an infection can be shortened from one to two weeks This same principle of rhythmic pre
be used with advantage I believe in ab
the rectum and colon, the pericardium an

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[For other information see second page following reading matter]

SATURDAY, APRIL 13, 1907

THE RELATION OF CHLORIDS TO EDEMA

Although several writers had previously suggested the possibility of edema being due, at least in certain conditions, to the presence of abnormal quantities of sodium chlorid in the tissues, yet general attention was first called to this possibility by the observations and writings of H Strauss in Germany and of Widal in France in 1902 and 1903 These clinicians observed a striking correlation between the elimination of chlorids and the development of dropsy in certain cases of nephritis, and brought forward evidence to support the hypothesis that in nephritis the ability of the kidney to excrete sodium chlorid is decreased, and that the retention of this salt in the body causes a corresponding retention of water to dilute the salt to that degree of concentration which is compatible with the normal osmotic pressure of the blood and tissue fluids Many clinicians adopted the suggestions of Strauss and Widal as to the treatment of edema by reduction of the chlorids in the food, and soon the literature of all countries was filled with reports on this subject, describing results and giving conclusions greatly at variance with each other The first excitement having passed, it is now safe to analyze the various reports that thus far have been submitted, and to attempt to draw conclusions with some hope that they may be reasonably correct [1]

In the first place, the reports of many competent observers leave us no choice but to conclude that in nephritis, particularly of the parenchymatous type, retention of chlorids often occurs, yet in some typical cases with edema it may not be possible to demonstrate such retention Also, patients may show a distinct chlorid retention for some time, and then, without evident reason, the retention may cease Furthermore, in some cases of interstitial nephritis retention may be as marked as in the parenchymatous forms, and this retention is not always associated with edema. In certain cases of nephritis, the edema will be found to vary directly with the degree of chlorid retention, as in the striking instance reported by Widal and Javal, in which it was possible to cause the edema to appear and disappear almost at will by varying the amount of the chlorids in the diet In other cases, however, even the most careful reduction of the chlorid intake will not appreciably modify the edema, while in perhaps the largest number of cases the amount of edema may be reduced by this means, but not always strikingly or constantly In other words, the weight of evidence indicates that retention of chlorids frequently is an important feature in the edema of nephritis, but it is not always possible to demonstrate its relation to the edema. Apparently the power of the kidneys to eliminate chlorids varies from time to time, just as the excretion of albumin and the presence of casts may vary Probably one important reason for our inability to demonstrate a clear relation between chlorid excretion and edema lies in the great power of the body to retain fluid without the development of edema, for example, in one case of nephritis it was observed that feeding salt led to a marked retention of water, but edema did not begin to appear until the patient's weight showed that twelve pounds of water had been accumulated in the body This power of retaining water without manifestation of edema makes it impossible to establish a close parallelism between the chlorid excretion and the edema, especially when the cases can not be studied very accurately for long periods of time

Some observers have thought that the primary trouble in nephritic edema is the retention of water, to which the retention of salt is secondary, but the weight of evidence here seems to be that the chlorid retention is primary and the water retention is secondary The retention of the chlorids seems to depend entirely on the inability of the kidneys to excrete them Apparently the retained chlorids are held in the tissues throughout the body, for many analyses have shown a retention of chlorids in the tissues—the so-called histo-retention The amount of chlorids in the blood is not, and can not be, greatly increased, for water must always accumulate to keep the osmotic concentration of the blood not far from normal Why and how the chlorids accumulate in the tissues in excessive amounts is one of the unsolved problems

There seems to be no tendency on the part of those who question the general importance of chlorid retention in the etiology of edema to deny the facts brought forward by Widal and others, which show that in at least some cases this retention is the cause of the accompanying edema The chief question is How often does edema depend on chlorid retention, and how often is this factor absent or of minor importance as compared with the other possible causes of edema that may be present in nephritic patients? The answer to this question can not possibly be given on the strength of the information afforded by the discordant reports that are to be found in the literature, but it seems safe to say that chlorid retention is an important factor in a very considerable proportion of nephritic edemas Chlorid retention has also been observed in some cases of dropsy in heart disease, and with some edemas occurring in patients with acute inflammatory disorders, but here it is

1 A full bibliography of this subject will be found in the resumé by Martin Kaufmann Centrbl f. d. gesamte Physiol u. Pathol. des Stoffwechsels 1906 vii 497

not so well established that the observed chlorid retention is more than can be explained as due to the retention of the fluid in the edematous parts

In any case however, the treatment of renal dropsy by "dechloridization therapy" seems to be warranted on several grounds. In the first place, of course, comes the indication that in many cases edema is relieved by this means, the amount of chlorids excreted on a chlorid-poor diet being much in excess of the amount taken in, such a diet soon leads to removal of the retained chlorids and with them the retained water Secondly, there is considerable evidence that chlorids may act injuriously on the diseased kidneys, indeed, excessive quantities of sodium chlorid may cause albuminuria even in healthy individuals, which observation suggests the possibility that the use of oversalted foods may be an important factor in the production of nephritis It seems to have been commonly found that nephritic patients kept on a chlorid-poor diet show a decreased amount of albumin in the urine, while administration of chlorids causes it to increase. Furthermore, there is abundant evidence that there is no danger in reducing the intake of chlorids to as low a figure as can be done by a carefully selected diet To reduce the chlorids to such a reasonable minimum, say from 2 to 3 grams a day, no very difficult procedures are necessary, for in eggs, unseasoned meats and unsalted butter we have foods that are nearly salt-free while the salt content of milk is very low Bread without salt, fresh water fish, potatoes, rice, fresh vegetables, fruits and chocolate offer a considerable variety of salt-poor foods that make the regulations of a dechloridization diet not intolerable to the patient It may be added that Widal insists on repeated weighing of the patient, in order to keep track of the degree to which the water is being removed during the treatment

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THE MEDICAL STAFF AND THE HOSPITAL

The importance of hospitals to the community is now so universally acknowledged that it needs no comment, the organization of hospitals, on the other hand, and the proper relationship which should exist between the medical staff, the administrative officers and the public is a matter which has been treated in this country in far too haphazard a manner Every hospital trustee, every superintendent and every member of a hospital staff should read the admirable discussion of hospital organization which has recently appeared from the pen of Dr Goldwater[1] of Mount Sinai Hospital New York City

Goldwater's article discusses seriatim, in a clear and forcible manner the medical staff in relation to the needs of the patient, in relation to medical education in relation to hospital economy, and in relation to the rights of its members It is not the place here to cover the entire ground passed over in this article let it suffice to call attention to some of the salient points, particularly those which refer to details of administration differing from those currently in use in this country The stress which is laid on the importance of having the admission of patients under the control of mature medical men of good judgment rather than under inexperienced junior house officers, strikes us as well worthy of attention We would not like to say how much of the popular prejudice against many hospitals is due to tactless handling of applicants for admission particularly of rejected applicants There is little doubt that an unfavorable first impression is often prejudicial to the hospital's interests and too often the entering patient is subjected to the attentions of attendants who seem to have the unhappy knack of acquiring the flippant callousness and disregard for other people's feelings which are often associated with ticket sellers and second-class hotel clerks Regarding the care of the patient after admission, Dr Goldwater emphasizes several points, none more worthy of emphasis than the necessity of visits at regular stated intervals by the attending staff The quotation from Osler to the effect that the physicians should not only make their visits at stated hours, but should also stay stated hours is one which could be well heeded by many hospital visiting physicians

The suggestions regarding the house staff show that from Dr Goldwater's point of view, most American hospitals are wofully undermanned in this particular We fully agree with the writer in this, as we do in his view that each interne should have both a medical and a surgical service to obtain proper breadth of view The rule that no interne should be promoted to a higher grade who has not shown fitness in a lower one is on the books of far too few of our hospitals

Two points of especial value are those relating to the family physician, and to the patient during the period of convalescence Dr Goldwater suggests that the family physician of a ward patient should have every encouragement to visit his patient in the hospital not to advise the regular staff but for the effect on the welfare of the patient We thoroughly agree with this and hope that the narrow spirit which has heretofore prevented it in many hospitals will soon disappear The suggestion that the patient's future be discussed during convalescence and that the hospital should keep in touch with various charitable institutions which may harbor and protect the patient from the necessity of too early work is of great value and is too often not considered in routine hospital work

The discussion of the relation of the hospital to medical education is brief The keynote of the remarks on this subject lies in the statement that the reason why teaching hospitals are at present so expensive is that only a few hospitals realize their responsibility in this direction If all hospitals regarded teaching as a necessary and legitimate part of their functions the number of students assigned to each institution would b

1 Am Jour Med Sci April 1907

small that practically no extra expense would be incurred This is certainly the case so far as the large cities are concerned, for hundreds of charity beds in cities like New York and Chicago are never adequately used for teaching purposes Dr Goldwater's paper also contains many pertinent remarks concerning the private ward system, the necessity of presenting the economic side of hospital affairs to the medical staff, and the representation of the medical staff in the affairs of the hospital

THE RELATIVE VALUE OF CULICIDES

Disinfection for the prevention of yellow fever and malaria having practically resolved itself into mosquito destruction, the scientific study of culicides has assumed much interest and importance Investigations in this direction are being made by the United States Public Health and Marine-Hospital Service

Passed Assistant-Surgeon Francis of that Service some time ago reported that the fumes of pyrofume, a liquid derived by fractional distillation from pine wood are deadly to *Stegomyia fasciata* and *Culex pungens*[1] Mosquitoes placed in cages on the floor of a room containing the fumes from 265 cubic centimeters of this liquid per 1,000 cubic feet of air space were found dead after one hour While in this proportion pyrofume is not injurious to metals, fabrics, paint and colors, it has been found that in greater amounts it softens varnish and leaves a deposit on surfaces Its inflammable nature will also render it objectionable as a culicide until a generator is devised that will evolve the gas without danger

Francis has more recently reported a series of experiments on the culicidal properties of camphor-phenol and of sulphur[2] The camphor-phenol was made as follows The phenol crystals were liquefied by placing the bottles in boiling water, the liquid was then poured into a pan and weighed, and to the hot liquid was added an equal weight of gum camphor, which became dissolved after standing a few hours

In these experiments great care was taken artificially to protect the mosquitoes in such a way as to simulate the conditions which ordinarily aid the mosquito in escaping the effects of harmful gases As a result of forty-two experiments on 10,000 mosquitoes he concludes that the fumes of camphor-phenol possess no powers of penetration that they diffuse poorly, and that they are diminished in efficiency by low temperatures Mosquitoes show a tendency to recover from the effects of this agent, and varnish is softened when the fumes are strong—an evident disadvantage in the treatment of furnished houses and cabins aboard ships

Twenty-four experiments with sulphur confirmed the value of this agent so long used in quarantine practice Small quantities of sulphur proved effective in tests demanding all the necessity for penetration and diffusion likely to be found in practical fumigation Unfortunately, the fumes of sulphur are in a measure destructive, otherwise it would meet all the requirements of a gaseous culicide The well-known poisonous effects of hydrocyanic acid fumes are sufficient to discourage their use in actual practice, and in view of these studies it appears that we must for the present at least continue to rely on sulphur as the most efficient insecticide

1 Public Health Reports xxi No 26
2 Public Health Reports xxii No 14

MAJOR KEAN AND THE SANITARY TRIUMPH IN CUBA

One of the incidents connected with the relations of this country to Cuba, of which Americans can be justly proud, is the improved hygienic conditions that resulted when the United States assumed control after the Spanish-American war The Army of Occupation found very insanitary conditions The administration and management of almshouses, asylums, orphanages and hospitals of all sorts and sizes had fallen into a chaotic condition throughout the island Some of the institutions had means but only a few inmates, others were almost without money to keep the unfortunate inmates from actual starvation and yet were crowded with patients There was a lack of system everywhere

General Wood cast about for men to bring order out of chaos, the conditions demanded men above the average, who understood the needs of such institutions, and with a faculty for organization Major J R Kean, surgeon, U S Army, was one of those selected His work in putting the organization of the institutions of Cuba, especially the hospitals, on a sound and scientific basis was of great value and was mentioned in flattering terms both by the Military Governor and the Secretary of War The result was a brilliant success, a symmetrical and well-organized system While this work of Dr Kean was appreciated at the time by those who were in a position to know what was going on, it attracted very little public attention

At that time the general hygienic conditions also were in a deplorable state, Havana was one of the most filthy and most unhealthy cities of the world When it was turned over to the Republic of Cuba it had become one of the cleanest and healthiest, considering the latitude Similar work went on under American officers all over the island One of the men to whom special credit was due for the improved conditions was Major Kean, who, as chief surgeon under General Fitzhugh Lee, had charge of some of the most important functions connected with the cleaning up of Cuba

When the American Army of Pacification was sent to Cuba last October it was found that conditions had deteriorated under the independent Cuban régime, yellow fever was prevailing in the island, a dozen cases being in Havana alone Thus our troops were endangered by a disease which while not regarded seriously by the Cubans, might result most disastrously to the

soldiers The provisional government being essentially military in character, it fell to the Medical Department of the Army to supply an officer to take charge of the sanitary affairs The Secretary of War selected Major Kean, and to him and to his assistants must be given credit for the splendid results which followed Our news columns have shown week by week a gradual decrease in the number of yellow fever cases reported, Havana having not a single case since January 1, and the island itself being free from the disease Since January 10 there has not been a case of yellow fever, among the enlisted men, and only one officer contracted the disease This task also required intelligent, faithful and persistent effort, and Major Kean and his assistants furnished it Working under the difficulties of a strange language and an ignorant population intensely conservative in its habits of life, they have accomplished a task that is a credit to the country and to preventive medicine

It is a pity that such work should go unrecognized by the general public, for it is certainly as praiseworthy as any incident connected with our relations with Cuba Probably if what might have resulted were a known rather than an unknown quantity, if it were known that certain thousands of soldiers would have been disabled by sickness, and that a definite number would have died had these essentials of preventive medicine not been carried out, the public would show its appreciation and would acknowledge its debt for such work to the men who did it and to preventive medicine in general

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THE BUSINESS SIDE OF MEDICINE IN CANADA

The failure on the part of the medical profession to take due thought of the practical and material side of its work has often been noted A Canadian writer[1] recently made the statement, based on the experience of a medical friend, that through indifference and want of cooperation many physicians in the larger cities are living "very near the edge of want and ordinary comfort" That this is relatively true in the United States will be doubted by no one who is well acquainted with the personnel of the profession in the large centers of population, and apparently the same conditions obtain among our northern neighbors The conclusion follows that we are negligent in our duty to our families, not only so far as present necessities are concerned, but also for the future This is all the more apparent when we consider the universal tendency toward organization and the confederation of common interests now going on in all lines of industrial and professional life These conditions in the medical profession are largely the result of indifference and as the writer says we have, through indifference, "the establishment of osteopathy, chiropractic, etc Through indifference we hang on the walls of our offices dazzling chromos of 'patent-medicine' companies Through indifference we take journals—called medical—whose almanac character is easily noticed Through indifference Eddyism and other delusions interfering with medical practice are allowed Too much study do we give to phagocytosis and opsonins, tubercle bacilli and the *Stegomyia fasciata* and too little to materia medica" And it might be added, too little study do we give to those problems of medical economics on which the future success of the profession depends It is evident that the same practical problems are confronting our professional brethren in Canada that we have before us here It is also evident that many physicians are beginning to ask the reason for existing conditions and are making efforts to determine the best means of remedying them Such signs of the times are encouraging and lead to the hope that the renaissance in medicine which so far has been confined to its scientific achievements, may also extend to the economic conditions that are at present presenting such perplexing problems

1 Sprague (J S) Medical Thoughts Facts Fads and Fancies Canada Lancet February 1907

STEGOMYIA CALOPUS THE YELLOW FEVER MOSQUITO

We are informed that *"Stegomyia calopus"* has been adopted by the Public Health and Marine-Hospital Service and by the Bureau of Entomology, Department of Agriculture, as the official name of the yellow fever mosquito In the matter of nomenclature this insect has undergone many vicissitudes Among the names by which it has been known, *Culex fasciatus Culex calopus* and *Stegomyia fasciata* are the most familiar The mosquito since recognized as responsible for the spread of yellow fever was originally classified as a culex and received over a century ago the title *Culex fasciatus*, a name previously bestowed on an insect not identical with the one in question The term *Culex calopus* was proposed somewhat later and with the recent transference of this mosquito to the genus *Stegomyia* the name *Stegomyia calopus* resulted

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Medical News

DISTRICT OF COLUMBIA

Graduation Exercises.—The graduation exercises of the United States Naval Medical School were held in Washington, March 30, when diplomas were given to a class of 28 by Assistant Secretary of the Navy Newberry The principal address was made by Dr J Chalmers Da Costa Philadelphia, and addresses were also made by Surgeon General Presley M Rixey and Medical Director John C Wise, U S Navy, president of the faculty of the school

Illness of Major Carroll—Major James Carroll of the Medical Department of the Army who was promoted from the grade of first lieutenant to that of major by special act of Congress in the last hours of the recent session as a reward for his distinguished services as a member of the yellow fever commission in Cuba has been quite ill at his residence in Washington for the last two months Major Carroll is suffering from a continued fever of an obscure character, and while he has not at any time been in a dangerous condition his continued illness has caused more or less uneasiness to his friends At the present time he is improving and it is hoped that he will soon be able to resume his duties

ILLINOIS

Personal—Dr Max F Clausius, Palatine, has removed to Norwood Park —Dr Nelson K McCormick Normal has been appointed medical director of Bro[illegible] ng ton —Dr Fred Rose Columbia was s[illegible] he accidental discharge of a shotgun while [illegible] was taken to Henrietta Hospital East

Railway Surgeons Meet—What will be known as the T, P & W Railway Surgeons' Association was organized at Peoria, April 1 The organization expects to be affiliated with the American Association of Railway Surgeons The visiting surgeons were the guests of Dr Elmer M. Eckard, surgeon in chief of the Toledo, Peoria & Western Railroad

Chicago

Gift to Charity—The Chicago Women's Aid Society at its recent meeting donated $1,000 to the Michael Reese Hospital for use in the children's ward.

Interne Examination.—As a result of the examination of the 96 students at the Cook County Hospital recently, 44 students passed the required grade Fifteen of the successful applicants will be appointed internes in June

Deaths of the Week—For the week ended April 6, 686 deaths were reported, or 58 less than for the preceding week, and 26 less than for the corresponding week of last year This is equivalent to an annual death rate per 1,000 of 16 97

Increase in Deaths—The greatest increase in death causes for the first quarter of 1907, as compared with the corresponding period of last year, was from pneumonia, with a total of 1,860 deaths, or 552 more than in 1906, scarlet fever, with 220 more tuberculosis, with 120 more, and heart diseases with 156 more

Mortality of the Quarter—During the three months ended March 31, 9,104 deaths were reported, equivalent to an annual death rate of 17 52 per 1,000, an increase of 22 2 per cent over the death rate for 1906 for the same period, which was 14 34 per 1,000 Among the principal death causes were pneumonia, 1,860, consumption, 1,014, heart disease, 690, Bright's disease, 582, and violence, including suicide, 545

Pure Food Show—It is announced that the first World's Pure Food Show will be opened in the Chicago Coliseum November 19 and will continue for one week The test committee for the exhibit will consist of Dr Harvey W Wiley, Washington, D C, Drs John H. Long, Ralph W Webster, Archibald L. Hovne and Joseph F Biehn, of Chicago, Prof Julius Stieglitz of the University of Chicago, and Dr James A. Egan, secretary of the State Board of Health

March Mortality—During March 3 065 deaths were reported, or 602 more than for the corresponding period of last year Pneumonia caused 657 deaths, consumption, 366, heart disease, 241, Bright's disease, 188 violence, including suicide, 177 Deaths from scarlet fever diminished, as compared with last month, from 142 to 87, those from diphtheria from 51 to 32, those from typhoid fever from 33 to 21, those from influenza from 36 to 28, and those from measles from 32 to 18

MARYLAND

Hospital Report—The report of the Washington County Hospital, Hagerstown, for its first year, showed that the receipts were $16 245, and the disbursements $12,542 There were 106 patients admitted, of whom 75 were surgical and 31 medical cases There were 72 operations performed, and 17 deaths occurred during the year, equivalent to an annual death rate of 16 03 per 1,000

Baltimore

Mosquito Question.—The city council ordinance for the prevention of breeding of mosquitoes will become operative May 1 The carrying out of the ordinance is in the hands of the health department and $10,000 has been placed at its disposal.

Tuberculosis.—The University of Maryland Nurses' Alumni Association gave an entertainment April 5 for the support of tuberculosis nursing among the poor A committee has been appointed to study the tuberculosis situation in the state and to supervise the expenditure of the $10 000 recently raised for this purpose

Illegal Practitioners—On the testimony of the State Board of Medical Examiners the grand jury is said to have found presentments on the charge of practicing medicine without a license against James E. Creevy R Crowley Robert H Darrah D Romeo and Pasquale Romeo It is said that the law is constantly being violated by medical students and druggists

Personal.—Dr J M T Finney spoke at the last of the men's meetings held at Belair Harford County March 31 ——Dr Stephen H Watts of Johns Hopkins University has been elected professor of general surgery in the University of Virginia and director of the University Hospital ——Dr L. Ernest Neale was operated on for appendicitis at St. Joseph's Hospital April 5 ——Dr Lewis M. Allen was elected vice president, and Dr Gordon Wilson, a member of the executive committee, at a recent meeting of the Society of Virginia University Alumni in Maryland ——Dr William H Welch lectured on tuberculosis and its problems at the Johns Hopkins Medical School, April 4 ——Dr Frank Bressler sailed for Jamaica, April 3 ——Dr Harry W Plaggemeyer has been appointed interne at King's County Hospital, Brooklyn, N Y

MISSISSIPPI.

Communicable Diseases—The secretary of the State Board of Health reports the state to be in an exceptionally healthy condition The smallpox contagion has abated in many communities, where it was reported during the winter The disease is still present in mild type in a few localities in the delta

Hospital Staff—The following physicians have volunteered to give their services to the King's Daughters Hospital, Gulfport Emergency surgeons, Drs Hunt and Robert W Shipp, female medical ward, Drs Henry S Capps A L Morris and Barnes, male medical ward, Drs Crawley, Heard H. West and W T Hutchins, female surgical ward, Drs Charles LeBaron, Charles A. Sheeley and Mathis, and male surgical ward, Drs Robert A. Anderson and Edward C Parker

Commencement.—The first annual commencement exercises of the Mississippi Medical College, Meridian, were held March 30, when a class of 22 received diplomas Dr William W Hamilton, president of the faculty, presided, Dean Nathan L Clark gave a short historical review of the institution, Mr Edwin McMorries, president of the board of trustees, awarded the diplomas, and Dr W T Lowry, president of the Clinton (Miss) College, delivered the annual address

Society Meeting—At the annual meeting of the Attala County Medical Society, held in Kosciusko, March 18, the following officers were elected President, Dr Edward C Coleman Kosciusko, vice president, Dr Charles F Carnes, Kosciusko, secretary treasurer, Dr John H Portwood, Kosciusko, and censor, Dr Thomas F Turner, Smyrna The question of fees for life insurance examination was discussed, but final action was deferred until after the meeting of the state association

MISSOURI.

Emergency Hospital.—An emergency hospital in the basement of the city hall of Kansas City was opened to receive patients March 30 The hospital equipment consists of two wards, one with eight cots for men, and one with four cots for women, and an emergency operating room

Pasteur Institute in St. Louis.—A Pasteur institute, for the free treatment of hydrophobia, has been established at the city bacteriologist's office in the City Hospital Dr Downey L. Harris is in charge of the institute, for the use of which five rooms have been assigned

Medical Branch of University Offered to Kansas City—The curators of the Missouri State University met the mayor of Kansas City and a special council committee to discuss the establishment in Kansas City of a medical branch of the university, and proposed that the medical administration of the municipal hospitals of the city should be given to the medical department of the university, which would take off the hands of the city the burden of maintenance of hospitals, so far as drugs, surgical supplies, doctors, nurses and attendants are concerned

Personal—Dr David T Bailey, Trenton, has been appointed physician of Grundy County ——Dr Francis R Anthony, Maryville, has succeeded Dr Kearan C Cummins, Maryville, as physician of Nodaway County ——Dr Claude C Crowley, Richmond, county physician, has been elected secretary of the Ray County board of health ——Dr Julius H Weinsburg St Louis, was shot and seriously wounded by his son, March 18 ——Dr Hugo M. von Starkloff, St. Louis, sustained severe contusions of the hip in a collision between his buggy and a trolley car, March 20

Society Organized.—Dr William T Elam, St Joseph, counsilor for the seventh district, met the physicians of Andrew County at Savannah March 20 and assisted in the reorganization of the county medical society, with 15 charter members The following officers were elected President, Dr Elijah C Bennett Bolckow vice presidents, Drs John C Hosher, Rosendale, Sumner S Beever Amazonia, Ernest H. Carpenter, Helena and Walter C Myers Rea, secretary treasurer, Dr Clarence O Jefferies Savannah and delegate to the state association Dr Elijah C Bennett, Bolckow Dr Charles Wood Fassett, St Joseph, read a paper on 'The Benefits of Medical Organization."

NEW YORK.

Gift to Sanitarium.—John D. Rockefeller and Anson R. Flower have each given $12,500 to the Lake Kushaqua Sanitarium for Sick Working Girls, in the Adirondacks, and this gift will rid the institution of debt.

For Syracuse Hospital.—It is announced that Mrs. Russell Sage has given $5,000 toward the permanent endowment fund of the Hospital of the Good Shepherd, Syracuse, to be used for the maintenance of a free bed in the hospital.

Medical Club Election.—At the annual meeting of the Utica Medical Club, March 14, the following officers were elected: President, Dr. Andrew Sloan, vice president, Dr. William S. Nelson, secretary-treasurer, Dr. William H. Beattie, and trustees, Drs. Morris J. Davies, William J. Schuyler and Edwin Van D. Gazzam.

Reception to Mueller.—On March 30 the Albany County Medical Society gave a reception in the rooms of the Albany Historical and Art Society in honor of Dr. Frederick Mueller, professor of medicine in the University of Munich. During Dr. Mueller's stay in Albany he was the guest of Drs. Henry L. K. Shaw and Andrew MacFarlane.

Personal.—Dr. Roswell Park, Buffalo, is taking a trip to Cuba.——Dr. William R. Campbell, Niagara Falls, was operated on by Dr. Carlton C. Frederick, Buffalo, for cancer of the liver, March 21.——Dr. H. John Hunter has been elected health officer of Ilion.——Dr. Joseph E. Vigeant, Red Hook, was seriously injured at Elizaville, March 14, while attempting to board a train in motion.

Site for State Hospital.—A bill has been introduced into the legislature authorizing the state lunacy commission to select lands for a site for a state hospital for the insane in the southeastern part of the state. The lands selected not to comprise more than 1,000 acres. This commission is to report to the legislature of 1908 in respect to the lands selected, giving reasons why they are desirable.

Quarantine Hospital.—In a report made to the health commissioner of Buffalo by Dr. Francis E. Fronczak, assistant health commissioner, he states that he finds the hospital in very good condition and ready to care for any smallpox patient who might be sent there, but says he can not see why this expensive hospital should be continued at such a cost to the city without a single smallpox patient when there is such a great and immediate need of a hospital to care for individuals suffering from other infectious diseases. During the year ended March 31 there were reported to the board of health 2,963 cases of measles, 618 cases of scarlet fever, 530 cases of diphtheria and 287 cases of varicella and many other communicable diseases, but only one case of smallpox, and that of a very mild type.

Bills in the Legislature.—An act regulating cigar making has been introduced by Mr. Gluck, which provides that it shall be unlawful for any person making cigars to place any cigar or the materials composing it in the mouth, or to touch them with the lips during and as part of the making.——An act to amend the public health law in relation to the adulteration or misbranding of food or drugs provides that the term "food" shall include every article of food and every beverage used by man, that the term "drug" when so used shall include all medicines for internal or external use.——A bill amending the code of criminal procedure and designed to do away with the now famous hypothetical question in cases where the sanity of the defendant is at issue has recently been introduced in the state assembly.——On April 4 the assembly amended the so-called medical unification bill which provides for one board of medical examiners. Under the original bill it was contended that surgery might be practiced by osteopaths.

Pollution of Ice.—Dr. Porter, state health commissioner, in a paper on the "Pollution and Self Purification of Ice," published in the monthly bulletin of the health department, states that a bill will be introduced into the legislature giving the department supervision over the business of harvesting and distributing natural ice. He shows the ways in which ice may be contaminated and also that about 50 per cent. of the bacteria in the ice would perish from exposure to the cold, and that many bacteria would be so lowered in vitality as to be incapable of producing disease. He said the real dangers are those incident to handling and distribution, to surface pollution due to flooding the ice in order to get a thicker crop, etc. The Empire State Ice Association, which has just held a convention, protested against the impression that the ice taken from the Hudson was impure and unfit for domestic use. It was stated that New York City, which used the greater part of the supply, had the lowest death rate from morbific germ diseases of any city of considerable size in the country. The report of Dr. Jackson was criticised because the samples analyzed were from cakes of ice from which the surface had not been planed.

New York City

Personal.—Dr. Gordon Lindsay, senior surgeon at Bellevue Hospital, has been removed to Minturn Hospital, critically ill with diphtheria.——Dr. and Mrs. Thomas L. Stedman sailed for Europe on the Holland-American steamship *Noordam*, April 3.

Internes Ill.—Dr. Horace W. Frank, of Bellevue Hospital, is seriously ill with blood poisoning due to an infection received during an operation.——Dr. Marcel W. Sherwood, interne at Bellevue Hospital, was removed to the Minton Hospital, March 28, seriously ill with diphtheria.

Pneumonia and Tuberculosis.—According to the winter report of the Health Department, pneumonia has succeeded tuberculosis as the chief death cause. During the three months from Dec. 8, 1906, to March 9, 1907, the deaths from pneumonia in Greater New York were 4,519, while those from tuberculosis numbered only 2,496.

Bequests.—Daniel Vincent, who died in St. Vincent's Hospital March 20, bequeathed $35,000 to the Society of St. Vincent de Paul.——By the will of the late William C. Egleston St. Luke's Hospital will receive $100,000. The will also gives $20,000 to St. Mary's Free Hospital for Children, and $15,000 to the New York Institution for the Blind.

Jubilee of Dispensary.—The fiftieth anniversary of the German Dispensary was celebrated by a dinner at Hotel Astor, March 16. This function concluded the dedicatory exercises of the new Ottendorfer Dispensary. More than 300 physicians and surgeons on the staff of the German Dispensary and German hospitals of New York were present. Dr. Pius Renn was toastmaster and souvenir medals were distributed to the guests.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended March 30, 434 cases of tuberculosis, with 221 deaths; 419 cases of measles, with 5 deaths; 379 cases of scarlet fever, with 17 deaths; 311 cases of diphtheria, with 41 deaths; 120 cases of typhoid fever, with 15 deaths; 54 cases of whooping cough, with 9 deaths; 26 cases of cerebrospinal meningitis, with 20 deaths, and 70 cases of varicella, a total of 1,815 cases and 328 deaths.

Typhoid on the Croton Watershed.—There have been six cases of typhoid fever in the Italian camp at the Cross River dam, which is under process of construction, ten at Katonah and one at Bedford, where sewage flows into the city's water supply. A comparison of the number of cases of typhoid fever in this city for the week with the corresponding week of last year shows a notable increase in the number of cases, and every effort is being made to protect the water supply. An experimental filtration plant has just been put into operation at Jerome Park reservoir and the results will be noted daily.

Mayor Appoints Milk Commission.—The recent discussion over the problem of securing a pure milk supply for the city has resulted in the appointment of a milk commission by the mayor. The following men will serve on the commission: Drs. D. J. Bryant, former president of the board of health, T. Mitchell Prudden, Rowland C. Freeman, L. Emmett Holt and Abraham Jacobi. The work of this commission will be entirely independent of the board of health or any other city department. Any ordinance passed by the board of aldermen will have to receive the sanction of this commission before the mayor will give his signature.

NORTH CAROLINA.

Personal.—Dr. W. H. Smith, Goldsboro, has removed to Philadelphia.——Dr. James McKee has been re-elected superintendent of the Central State Hospital for the Insane, Raleigh, and Drs. Edwin P. Ferrebee and Charles J. Jenkins assistant physicians, for a term of four years.

Date of State Society Meeting Changed.—The committee of arrangements of the Medical Society of the State of North Carolina at a recent meeting changed the date of meeting from May 28 to 30 to June 11 to 13, at Morehead City. This will allow the members to attend the meeting of the Surgeons of the Southern Railway at Washington, May 28 to 30, the Tri-State Medical Association at Norfolk, June 2 to 4, and the American Medical Association at Atlantic City, June 4 to 7.

State Hospital Commission Organized—The State Hospital Commission, recently created by the legislature, met in Raleigh and organized by electing Charles A. Webb, president, and Dr J W McNeil, Fayetteville, secretary The commission has arranged for the purchase of 1,200 acres of land adjacent to the Central Hospital, Raleigh, with the idea of making extensive additions to the institution on the colony plan Large additions of land will be made to the institutions at Goldsboro and Morgantown The legislature has placed $500,000 at the disposal of the commission for the improvement and extension of the state's facilities for the care of the insane

OHIO

New Journal—A new monthly medical journal, called the *Diagnostician*, has made its appearance in Cincinnati

Hospital Notes—The report of St Anthony's Hospital, Columbus, for 1906 shows that 1,085 patients were treated during the year, with 64 deaths, one half of which were due to tuberculosis of the lungs——The new hospital at Warren is nearing completion and will probably be dedicated in June The building has cost about $40,000 Miss M E Surbray, Akron, has been appointed superintendent of the hospital

Epidemic Diseases—Chagrin Falls reports at least 200 children ill with measles, and that the public schools have been closed on this account——Dr Charles O Probst, Columbus, secretary of the State Board of Health, visited Castalia March 25, to investigate the epidemic of cerebrospinal meningitis Thirteen deaths have occurred in and near Castalia and one new case was reported April 1, making 18 cases in all——One death from cerebrospinal meningitis is reported in an adult in Toledo

Personal.—Dr Albert E Griffin, Columbus, who was recently operated on for appendicitis, has been discharged from the hospital——Dr John L Davis, for many years medical director of the Union Central Life Insurance Company, Cincinnati, has resigned to accept a similar position with the Pacific Mutual Life Insurance Company, San Francisco——Dr George W McCoy, interne at the City Hospital, Cincinnati, has been appointed resident physician at the Manhattan Eye and Ear Hospital, New York City——Dr Augustus C Schwartz, city health officer of Tiffin, has been elected physician the Seneca County jail for one year, vice Dr A M Campbell, rm expired——Dr James F Heady, Glendale, has been elected professor of medical economics in the Miami Medical College, Columbus——Dr Katharine R. Moses, in charge of the female department of the Cleveland State Hospital, has resigned——Dr Edwin Reinert, Columbus, has been appointed a member of the board of public safety——Dr Harry E Welch has been re elected health officer of Youngstown——Dr Arthur E Osmond, resident physician at the City Hospital, Cincinnati, has resigned

Society Secretaries to Meet.—The Ohio State Medical Association has arranged for a convention of the county society secretaries of the state to be held at Columbus, April 25, for a discussion of the work of county secretaries and for devising methods to facilitate and increase the effectiveness of the secretaries' work A program, lasting throughout the day, is to be opened by an address of welcome by Dr Frank Winders secretary of the Ohio State Medical Association The following papers will be presented "The Relation of the Secretary to the Society and the Profession" Clyde E Ford, secretary of the Cleveland Academy of Medicine and the Cuyahoga County Medical Society "The Relation of the Secretary to the Council" T W Rankin, Columbus, councilor of the Eighteenth District "The Relation Between Local and District Societies" J S Rardin Portsmouth, "How the Secretary's Work May be Made Easier," Carrie Chase Davis, Sandusky secretary Erie County Medical Society, "My Plan for the Struggle Nelia B Kennedy Findlay secretary Hancock County Medical Society "What Can a Secretary Do to Secure New Members" John B Donaldson Lorain secretary Lorain County Medical Society During the noon intermission lunch will be served at the Neil House The afternoon session will be opened by an address on "Medical Legislation" by Charles A L Reed Cincinnati chairman of the Committee on Medical Legislation of the American Medical Association John B Donaldson Canonsburg Pa secretary of the Washington County (Pa) Medical Society will read a paper on The Secretary and His Opportunity after which papers will be read by Herschel Fisher Lebanon secretary of the Warren County Medical Society on "How Can We Make 'Open Meetings Most Successful'" by Horace Bonner Dayton councilor of the Second District on "The Social Factor in the Life of the Successful Physician," and by O M Wiseman, Zanesville, on "Our New Doctors" Papers by R H Grube Xenia, secretary Greene County Medical Society and N Worth Brown, Toledo, secretary Toledo and Lucas Academy of Medicine, on the value of graduate courses to medical societies in the country and in the city, will close the program A large attendance of the county secretaries of the state is anticipated and it is hoped that much benefit to the organization will result from the meeting

PENNSYLVANIA.

Golden Jubilee of Physicians—Dr Jonathan L Forwood mayor of Chester for four terms, and chief of the surgical staff of Chester Hospital, one of the best known physicians and surgeons in the city, celebrated the fiftieth anniversary of his entry into the profession April 7 The Delaware County Medical Society had arranged to give a banquet in honor of this event, but by the special request of Dr Forwood gave up the idea

Ambulances in Coal Mines—It is reported that car ambulances are to be introduced in the anthracite coal mines of the state to facilitate the work of the first aid to the injured corps The ambulance cars resemble the ordinary mule cars but have springs, and two upholstered stretchers so arranged that either may be used exclusively Each car has a full emergency equipment The mine workers in the first aid corps are enthusiastic over the ambulance car idea

Hospital for Criminal Insane—At a meeting held April 5, at Honesdale, plans for the new State Hospital for the Criminal Insane were discussed Options on several hundred acres adjoining the site of 600 acres presented to the state by the Delaware & Hudson Railroad were obtained, and this land will be paid for from the appropriation of $10 000 for a site made by the last legislature Assurance has been given the commission of an appropriation of $150 000 to start building, by the present legislature. The site for the administration building, which is the first to be erected, was selected This building will contain the offices and quarters for the executive officers and accommodations for probably 100 patients It is the intention of the commission to build an institution capable of caring for 1 000 patients, the cost of which will be eventually more than $1,000,000

Communicable Diseases.—Of the 87,757 cases of communicable diseases reported to the State Department of Health during 1906 there were 24,421 cases of typhoid fever, 6,902 cases of scarlet fever, 10 842 cases of diphtheria and 23,729 cases of measles The following diseases are classed as communicable Actinomycosis, anthrax, bubonic plague, cerebrospinal meningitis, chicken pox, cholera, diphtheria, epidemic dysentery erysipelas, German measles, glanders hydrophobia, leprosy malarial fever measles, mumps, pneumonia (true), puerperal fever, relapsing fever scarlet fever, smallpox, tetanus, trachoma, trichiniasis tuberculosis, typhoid fever, typhus fever, whooping cough and yellow fever The statistics of communicable diseases are to be analyzed by the department of health for the purpose of comparing them with the record of deaths from the same diseases These statistics should be valuable in the immediate fight against disease throughout the state and in addition will furnish permanent data for the study of social conditions and will be helpful to the students of remedial legislation

State Board Examination—The next examinations of the Pennsylvania State Board of Examiners will be held at Harrisburg June 25 to 28 in Russ Hall 15 North Second Street and City Grays' Armory corner Second and Forster streets The first session will begin at 9 a m June 25 All candidates must have their credentials completed and have cards from the secretary of the medical council to present at the door at the time of examination Every candidate will be required to furnish a cabinet photograph of himself, endorsed in his own handwriting on the back and endorsed on the back by the dean of the college from which he graduated certifying to the correctness of the photograph and to the genuineness of the signature In cases where the dean has died or the college has ceased to exist an affidavit signed by the candidate must accompany the signed cabinet photograph Candidates desiring to file applications should apply to Dr N C Schaeffer secretary of the medical council Harrisburg or in the matters relating to work of the board to Dr W D Hamaker, secretary of the Board of Medical Examiners, Meadville

Philadelphia

Bequests—According to the will of Frederick Bauer, $1 000 is left to the German Hospital——The late Nicholas Lennig

devised $10,000 to the Maternity Hospital and $1,000 to the Philadelphia Dispensary

Deaths of the Week.—The number of deaths from all causes in the week ended April 6 was 617, a decrease of 38 from the number reported last week The chief causes of death were Typhoid fever, 13, diphtheria, 10, cerebrospinal meningitis, 12, tuberculosis, 75, cancer, 28, pneumonia, 77, and Bright's disease 50

Personal—Dr Joseph Neff has been appointed director of public health and charities, to succeed Dr W M Late Coplin Dr Neff is a member of the faculty of Jefferson Medical College and is medical director of the Jefferson Hospital.——Dr A Lee Clifton, who has been resident physician at the Delaware Hospital since June, has been appointed a resident physician of the University of Pennsylvania, under Dr John Clark

Hospital Notes—The report of the Wills Eye Hospital shows that during 1906, 800 new patients were admitted for operation and treatment and the clinics gave free service to 16,000 new and 80 000 old patients, from 63 counties of Pennsylvania, an average of about 300 a day The hospital is badly in need of extensions and additions to the building, and has asked the legislature to furnish them at an estimated cost of $150 000 and allowance for maintenance of $50,000 a year

Endorses Bill Controlling Marriage—The Philadelphia County Medical Society, at its meeting March 15, passed the following resolution

Resolved That the Philadelphia County Medical Society notes with great satisfaction the introduction of a bill before the Legislature of Pennsylvania requiring certificates to the effect that both parties to a proposed marriage are in the opinion of a qualified physician free from disease transmissible to progeny The society affirms the principle involved and endorses the effort of the community to secure the adoption of the measure.

Banquets.—At the annual banquet of the Davis Obstetrical Society, held March 23 Dr Edward P Davis, honorary president of the society, acted as master of ceremonies Drs Hobart A Hare, J Chalmers Da Costa and H Augustus Wilson and members of the faculty of Jefferson Medical College attended the banquet ——The twenty fifth annual reunion and banquet of the medical class of 1882, of the University of Pennsylvania, was held March 16, Dr Horace Jayne presiding Dr James Tyson, one of the three surviving members of the faculty at that time, was the guest of honor Historical sketches were read by Drs Judson Daland and William J Taylor

Alvarenga Prize.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga prize, being the income for one year ($180) of the bequest of the late Señor Alvarenga will be made July 4, provided that an essay deemed worthy of the prize shall have been offered Essays may be on any subject in medicine, but can not have been published They must be typewritten and must be received by Dr Thomas R. Neilson, secretary of the college on or before May 1 Each essay must be sent without signature, but marked with a motto and accompanied by a sealed envelope, having on its outside the motto of the paper and within the name and address of the author

Jubilee of Pathological Society—Elaborate preparations are being made by the Pathological Society of Philadelphia to celebrate in a fitting manner the fiftieth anniversary of its founding The morning of the first day, May 10, will be devoted to the welcoming of guests and to addresses by distinguished men from different parts of the country A luncheon to members and guests will be served at the University Club at 2 p m, and two hours later a commemorative meeting will take place in the amphitheater of the Pennsylvania Hospital where the first meetings of the society were held.. Dr William Osler regius professor of medicine Oxford University will deliver the principal address An exhibition of pathologic specimens will be opened to guests members and profession at large on Friday and Saturday in the Mütter Museum of the College of Physicians

TENNESSEE

Officers Re elected.—At the annual meeting of the State Board of Health April 7 Dr Heber Jones Memphis was re elected president, and Dr Thomas E Abernathy Chattanooga vice president

Communicable Diseases—More than 200 of the pupils of the schools of Knoxville are reported to be suffering with measles ——The smallpox situation in Weakley County is reported to be unimproved, several new cases having developed near Greenfield

TEXAS

Health of the State.—State Health Officer William Brumby Austin, asserts that smallpox is spreading in certain counties of the state and that approximately 20 counties are affected ——An epidemic of measles is reported at Killeen

Personal.—Dr Roland C Connor, Roby, has been appointed on the medical staff of the Canal Zone ——Dr Aleck Spencer Temple, has resigned as health officer of Bell County and has been succeeded by Dr Taylor Hudson of Belton ——Dr O T Brundy, Milford has been appointed surgeon to the Confederate Home, Austin

Hospital Notes.—The senate committee on public health made a favorable report, March 25 on the house bill appropriating $150 000 for the establishment of a state sanitarium for tuberculosis ——The annual report of Sealy Hospital, Galveston, shows that in 1906 there were 40 556 hospital days, a gain of 4 434 as compared with 1905 The daily average of patients for the year was 111, and 1,550 patients were admitted

War on Mosquitoes—At the last meeting of the board of city commissioners of Galveston, Dr Charles W Truehart city health officer, was granted permission to advertise for 120 barrels of crude carbolic acid for the use of the department during the coming summer to combat the mosquitoes and diminish the plague of house flies in the city ——The campaign against mosquitoes has commenced in San Antonio and good work is being done by the children of the public schools

VIRGINIA.

Personal—Passed Assistant Surgeon Rupert Blue of the United States Public Health and Marine Hospital Service has been made chief of the department of sanitation at the Jamestown Exposition ——Dr M F Hansbrough, Front Royal was painfully injured in a runaway accident at his home March 30

Honor to Dr Reed—The State Library Board has appointed an art committee, of which Admiral Harrie Webster is chairman to select a portrait of the famous surgeon and bacteriologist, the late Dr Walter Reed major and surgeon United States Army who was born at Harrisburg Va to be placed in the library

Anti Mosquito Crusade—An anti mosquito crusade is to be inaugurated in Norfolk during the summer by Health Commissioner Dupuy of that city who will be assisted in the work by Surgeon Charles P Wertenbaker and Passed Assistant Surgeon Rupert Blue of the United States Public Health and Marine Hospital Service

GENERAL

Yellow Fever in Cuba—Major Jefferson R Kean U S Army reported on April 6 a case of yellow fever at Nueva Paz, in the southeast corner of Havana province The patient was a Spaniard who had arrived from Spain December 13 and had not left the part of Cuba in which he was taken ill since that time There is believed to be no reason to fear infection in Havana

Internes Wanted in Insane Hospital—The United States Civil Service Commission will hold examinations June 13 and 14, at the usual cities throughout the United States to supply medical internes in the Government Hospital for the Insane Washington D C This examination is open to men who are citizens of the United States, aged 20 years or over and graduates of reputable medical colleges Applicants should apply at once to the commission at Washington for application form 1312

Attitude of the Filipinos Toward the Leper Hospital—Dr Heiser, chief quarantine officer reports that a remarkable change seems to have come over the people in reference to their attitude toward the leper hospital It is almost a daily occurrence for persons to apply voluntarily to the bureau of health for hospitalization Many individuals have come from the colonies and requested that they be admitted to San Lazaro Hospital until they could be sent to the Culion leper colony These facts Dr Heiser states, are significant and point to an improvement in the attitude of the people

Tropical Medicine Men Meet—At the third annual meeting of the American Society of Tropical [illegible] at the New York Academy of Medicine [illegible] read by Surgeon Lechinski W Spratt [illegible] Fever Sanitation" and Major L [illegible] S

V, on "Observations on Health and Disease in Eastern Africa" The following officers were elected President, Dr James M Anders, Philadelphia, vice presidents, Drs Rudolph Matas, New Orleans, and William S Thayer, Baltimore, secretary, Dr John M. Swan, Philadelphia, treasurer, Dr James Ewing, New York City, and members of the council, Drs Ramon Guiteras, New York City, and Joseph McFarland, Philadelphia

New Roentgen Ray Journal.—The latest addition to medical periodicals is the *American Quarterly of Roentgenology*, of Pittsburg, Pa, published by the American Roentgen Ray Society and edited by its president, Dr Preston M Hickey, Detroit, Mich This journal takes the place of the annual transactions of the society, and is the property of the society The first issue reflects great credit on the society and promises much for the future The policy of the society in reference to advertisements is not referred to in the editorial foreword, but judging from the advertisements that appear in the first issue, the pages are open only to those who have something to exploit that is of particular interest to roentgenologists The size of the journal is convenient and the mechanical work is excellent

Graveyard Regulations in the Philippines—One of the most important sanitary measures—certainly one of the most difficult and laborious—according to Dr Heiser, of the bureau of health of the Philippine Islands is the regulation of the cemetery question in accordance with the law, which states that it shall be unlawful to establish, maintain, enlarge or remove any burial ground or cemetery until a permit therefor shall have been obtained from the director of health This necessitates a careful examination into the sanitary conditions of all existing cemeteries The cemetery question has long been a neglected one and this makes its regulation more difficult Many municipalities are establishing municipal cemeteries in which interments may be made without discrimination on account of race, nationality or religion

Vaccination in the Philippines—In his report for the last quarter of 1906 Dr V G Heiser, chief quarantine officer, states that vaccination had to be temporarily abandoned in Antique because of a report that the people were being inoculated with he virus of leprosy, and in Occidental Negros, on account of eport that the people were being inoculated with cholera is On the island of Luzon, particularly on the coast with the exception of a portion of Tayabas, Sorsogon and oay provinces all the inhabitants have been protected As the travel is principally betwen coast cities, the danger of the spread of smallpox is considerably lessened This systematic scheme of vaccination has already borne results as attested by the fact that there is less smallpox in the Philippines today than perhaps at any time during the past 300 years Whenever the vaccination of a province is completed the work is followed up by vaccinating at intervals of every six months all the children who have been born during that period, and all unvaccinated persons who may have taken up their residence there during the interim During the quarter covered in the report the work of vaccinating the inhabitants of Cebu was completed This is the first time in the history of the Philippines that the people of the entire province, numbering over three quarters of a million have been vaccinated The complete vaccination of the inhabitants of Union province was also terminated during the quarter A clinical note on this work appears in this issue, page 1264

CANADA.

Infectious Diseases—The number of cases of infectious diseases in Montreal in March was 356 of which 101 were of tuberculosis——Over 1 000 residents of Three Rivers, Que, are reported to have typhoid fever, and the death rate is double the normal

Personal—Dr J H Elliott has resigned from the Muskoka Cottage Sanatorium and has been succeeded by Dr W J Dobbie of the Western Free Consumption Hospital near Toronto Dr Elliott will spend several months abroad——Dr Henri Hervieux, Montreal, will succeed the late Sir William Hales Hingston on the board of governors of Laval University

Hospital News.—The Canadian Hospital Association was organized in Toronto, April 1 Miss Louisa Brent of the Sick Children's Hospital, Toronto was elected president, and Dr John N E. Brown superintendent of the Toronto General Hospital, secretary Dr Renwick P Ross, Buffalo N Y delivered an address In connection with the Ontario hospitals, it was announced at this meeting that the government had raised the grant 20 cents per patient per day——The Vancouver (B C) General Hospital will spend an additional $20,000 on hospital equipment——The twentieth annual report of the board of management of the Protestant Hospital for the Insane at Verdun, Que, shows that on Jan 1, 1906, there were 503 patients in residence During the year there were admitted 87 men and 64 women The discharges numbered 110, and the deaths 31, leaving in the institution at the end of December 507 inmates

FOREIGN

International Congress of Physiotherapy—As already mentioned in these columns on page 1195, the Second International Congress of Physiotherapy will be held at Rome, Italy, Oct 13 16, 1907, under the presidency of Hon Prof Guido Baccelli Prof Carlo Colombo, Via Plinio, 1, Rome, is the secretary The American committee has been appointed with Dr Francis B Bishop, Washington, D C, as president, and Dr William Benham Snow, 349 West Fifty seventh Street, New York, secretary

Plague in the Ottoman Empire—Dr Post, American representative on the International Sanitary Board, reports that bubonic plague is on the increase at Djeddah, the port of Mecca When the first cases were reported great numbers of pilgrims were passing through Djeddah on their way to Mecca, and it was feared that the plague would break out among them A special meeting of the International Sanitary Board was called, and measures were taken to prevent its spread These were so successful that up to February 24 no case of plague had occurred among the pilgrims, over 100, 000 in number

Morphin from Mail Order Houses—The *Münch med Wochschr* relates that a Paris firm advertised in a German lay weekly that it would supply physicians and apothecaries "in discreet cases what they could not otherwise obtain" A German physician wrote to know if he could obtain morphin from the firm and received a prompt affirmative reply, with instructions as to the use of the morphin, "1 cg for one injection, and never more than three injections a day Internally 2 5 cg to begin with" The price charged was about $1 for 15 grains As no order was forthcoming the firm wrote again to offer the morphin at half price The article adds that customers can order and receive morphin from the large French department stores

Bicentennial of Linnæus—The scientific organizations of Sweden are making preparations to celebrate in the week of May 12 the two hundredth anniversary of the birthday of the great botanist, Carl von Linné, better known by his Latinized name, Linnæus As was mentioned recently in an editorial in THE JOURNAL, Linnæus was a physician, having taken a medical degree in the Netherlands in 1735, and four years later was appointed physician to the king of Sweden and professor of botany at Upsala He had published before this a work on the flora of Lapland, which he had explored under the auspices of the Swedish Academy of Sciences It was followed by numerous other works on botany which won for him the title of the father of systematic botany and of the binomial nomenclature of species The celebration of the bicentennial will be held at Upsala, where Linnæus lived, and where he died in 1778

Misuse of Names by Quacks—A German "magnetopath," C Pohl, stated in the circulars he has been distributing, that Virchow came to him for treatment of a throat affection and was cured by him, giving the date and other particulars, and citing Virchow's expressions of confidence in his magnetic treatment The magnetopath was recently before the courts for fraudulent practices and was condemned to a fine of $15 and 12 days' imprisonment In the course of the trial his lawyer referred to the Virchow incident and remarked that Dr H. Virchow Virchow's son, would confirm his client's statements in regard to the successful treatment of his father No notice was taken of the matter by the Virchow family, but Dr H Virchow has since written a letter on the subject to the *Deutsche med Wochschr*, page 517, discussing the legal phases of this outrageous misuse of his father's name and whether the magnetopath or others like him could be prosecuted for such statements He seems to be inclined to think that the sentence imposed even if the charlatan were condemned, would not outbalance the advertising for the charlatan in case suit were brought against him The affair has three aspects, that bearing on his father, that on the interests of the public, and that bearing on the interests of the medical profession In regard to his father young Virchow thinks that no denial is needed fr n him The interests of the pro

fession in the struggle against unscrupulous quackery have compelled him to discuss the incident especially the lawyer's statement in the above case He is informed that the law does not require the lawyer to ascertain the truth of such assertions on his client's behalf, and remarks, "When a lawyer is legally allowed to shield his client by making such baseless statements, it would be very foolish for the charlatan not to profit by such a fortunate circumstance" It is possible that the charlatan will continue in the future the misuse of Virchow's name, as this matter had nothing to do with the sentence imposed and no steps have been taken to date to stop it

Twenty fifth Anniversary of the Discovery of the Tubercle Bacillus—On March 24 just 25 years had elapsed since Robert Koch reported the discovery of the tubercle bacillus in a communication read before the German Physiological Society In the *Deutsche med Wochschr* for March 21 Loeffler gives an interesting sketch of the occasion Koch had been called from his obscure post in a country district to Berlin just two years before, not long after his publications on mouse septicemia and anthrax had attracted general attention On arriving at Berlin, just 37 years old he met with a frosty reception from Virchow, and his announcements were criticised by Virchow's followers, especially in the local medical societies The Physiological Society however under the leadership of Dubois Reymond gave him unprejudiced attention and supplied certain facilities for his further research Consequently it was to that society that he turned when ready to publish his discoveries on tuberculosis The hall was crowded to hear his communication "On Tuberculosis," although no hint of its importance had got abroad As he presented the array of facts which he had established every one present felt the importance of the occasion and not a word was spoken, not even when he had finished the session closing without a word of discussion The next day his demonstrations were thronged with scientists, including Virchow but it was years before the latter ever spoke of the bacillus except as "the so called tubercle bacillus" Koch's staining technic was an accidental discovery while he was seeking to photograph the bacilli He assumed that the blue stained bacilli would show better in a photograph if the whole specimen were stained further with Bismarck brown but examination of the specimens later showed that the bacilli still retained their blue tint when all else had turned brown He also found that this did not occur when a fresh solution of methylene blue had been used This suggested that some substance in the air must act on the blue solution as it stands, and he surmised that this might be ammonia as the air of a laboratory generally contains considerable ammonia A little ammonia added to the fresh solution of the blue made it act as he wished and he then assumed that any alkali would have the same effect This was the basis of the finally perfected stain

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, March 19, 1907

Sexual Problems in the Upper Schools

The movement for fighting venereal diseases by public instruction has called attention to the fact that numerous sexual infections take place simply from ignorance of the danger and of the means of prevention Thus in German speaking countries the university students at once, on entering the "alma mater" come under influences of free thinking and unscrupulous circles, and the contrast between the strict supervision in the preparatory schools and the absolute liberty in the university tends to turn the attention of the young men to sexual matters with the result that 30 per cent of all gonorrheal and 25 per cent of all syphilitic primary infections occur between the ages of 20 and 22 when in our countries the youths enter the university In a few of the preparatory schools the pupils during the last term are now instructed in the facts of sexual dangers Another important achievement of the recent movement in which several professors of the university are interested is the Instructions Blatt" a leaflet explaining in a few words the chief symptoms of sexual diseases and warning against treatment by quacks and secret remedies This leaflet is handed to the young laborers and factory hands to students on matriculating and to the scholars of the trade schools on leaving

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The Economic Cost of Epilepsy—The ultimate cost to the state of epileptics at large can not be estimated but it is enormous—H T Patrick M D in *Charities and the Commons*

Correspondence

Disclaimer Concerning a Book on Fractures by Lamb

U S ARMY MEDICAL MUSEUM AND LIBRARY,
WASHINGTON, D C, March 28 1907

To the Editor—For the past two years the Postoffice Department here has been receiving every day or so letters addressed to 'Prof D K Lamb Curator National Medical Museum" and has been sending them to me for want of anybody else who comes anywhere near filling the bill There is no Prof D K. Lamb in this city, and no institution of that name, nor am I curator of any museum These letters come from all parts of the country east of the Mississippi and they ask for a copy of the New Methods of Reducing Fractures and Dislocations" I am unable to learn of any such book published here or distributed from here gratuitously as the applicants all evidently understand I have replied to a number of these letters but can not continue to do so

D S LAMB

Miscellany

Scarlet Fever Seven Times—This occurrence is reported by a Spanish writer cited in the *Münch med Wochschr*, liv 283 The first attack occurred at the age of 7 and the latest at 21 The disease is said to have been diagnosed by some of the best authorities in Spain each time

Case of Fatal Xerostomia—Zagari describes a case of dryness of the mouth from total absence of the salivary secretion owing to atrophy of all the maxillary, parotid and sublingual salivary glands The patient was a woman of 50 and she succumbed in less than two years to the marasmus resulting from lack of the secretions of the salivary glands Autopsy revealed a syphilitic or parasyphilitic lesion in the upper part of the oblongata He concludes that there must be at this point an anatomic nucleus presiding over the salivary glands and also over the sense of taste in the anterior two thirds of the tongue as function was abolished over this stretch in his case From this bulbo spinal center a neuron evidently passes through the chorda tympani to the salivary glands The histologic findings in the case are shown in several illustrations accompanying his communication in the *Policlinico* xiv 45, 1907

Contagion of Leprosy—Since the establishment of the third leprosorium in Russia at Wenden 10 years ago it has sheltered 183 lepers Kawull's report of its work is published in the *St Petersb med Wochschr* for January 26 He mentions a number of instances of proved transmission of the disease In two cases the leprous wife infected her husband, in two the father his son in four the father his daughter, in four the mother one or more children and in one family the father with tubercular leprosy infected his brother, his sister and his four children In four cases a brother or sister became infected in eight an inmate of the house Two patients ascribed their infection to having worn garments used previously by a leper and two other patients to washing the garments of a leper The tubercular form seemed more malignant than the other macular variety, both in regard to its course and to infection of others

Microscopic Examination of Endotheliomata of the Neck—Wyatt Wingrave pathologist to the Central London Throat Hospital states that during the last year he has examined several growths belonging to the tumor described as endotheliomata removed from the cervical and parotid regions and from the upper respiratory and digestive tract The tumors he asserts may be defined as neoplasms developed from and following the type of epithelial or endothelial cells such as are found lining blood and lymph vessels When starting from the lining of perivascular lymph spaces they are called perithelioma but [illegible] (Ann Rhin and Otol London) there [illegible] character of their element [illegible]

loosely termed "adenosarcoma," "atypical carcinoma," "mixed sarcoma," but Wingrave states that on looking over old preparations he would now unhesitatingly describe them as endotheliomata The tumors may originate either from the epithelioid lining of vascular channels, blood and lymphatic (endotheliomata), or that surrounding the vessels (perithelio mata) Cytologically, there is no difference, but the spreading and grouping of the essential elements are somewhat different The tumors are also said to arise in vestigial structures, such as occur in connection with the branchial clefts on and in the intercarotid gland, probably from angioblastic elements In structure, they are usually firmly encapsulated The stroma is well marked, either fibrillated or homogeneous, forming spaces of varying size Cells when present are elongated, fusiform and closely packed, sometimes encapsulated, giving the appearance of cartilage The matrix contains mucigen or collagen The essential endothelial elements are cells which, though varying in size and shape, always possess the characteristic of the epithelioid or mesothelial cells, viz, large oval nuclei, having a fine close chromatin network and staining faintly with hemalum The cytoplasm is abundant and very finely granular or clear The cells may be columnar, spheroidal, flattened or fusiform Very rarely they are laminated, forming pearls like ordinary squamous epithelium, from which they may be easily distinguished Heterо mitoses are not common neither is lymphocytosis with wandering chromosomes—features so characteristic of epitheliomata

Electricity Barred from Turkish Hospitals—H Paull of Carlsruhe writes entertainingly in the *Deutsche med Wochschr* February 28, of a trip in the eastern Mediterranean He states that the Sultan is convinced that electric lights, electric tram cars, telephones, etc, are devices of the evil one, and that he has strictly forbidden their use throughout his dominions This deprives the hospitals of radiology and electrodiagnosis, etc In the Turkish hospitals, besides, the thermometer is regarded as superfluous Dr Devcke, formerly of Hamburg, is in charge of the Gülhane Hospital at Constantinople, and by great diplomacy and tact he secured permission to use electricity in this hospital Not long ago he received orders from the Sultan to vacate the hospital entirely and to remove all the inmates and equipment, as the Sultan wanted to attend the great mosque near by and did not wish to be disturbed by the presence of the sick and of the diabolical electric machines so near him Again the sturdy German's diplomacy brought him successfully through this crisis, but the hospital suffers constantly from an utter lack of funds to maintain it properly In Greece, on the other hand Paull says, the hospitals are equipped and maintained on a level with the standard of western civilization even rubber gloves are not wanting He comments on the immense number of bladder stones preserved in the hospital at Smyrna The composition of the water is locally regarded as the cause of this tendency to bladder stones [This traveler's experience seems not in accord with the reports of the Constantinople correspondent of the London *Lancet* The latter gives the impression that a large proportion of Turkish hospitals are pretty fairly equipped with modern appliances]

Association News

HALF FARE TO ATLANTIC CITY

One Fare for Round Trip to the Annual Session of the American Medical Association.

The New England Passenger Association, the Trunk Line Association and the Central Passenger Association have granted a rate for the round trip of one first class limited fare plus $1 Tickets will be good going June 1 to 4, inclusive returning leaving Atlantic City June 4 to 10, inclusive By deposit of the ticket by the original purchaser in person with the special agent at Atlantic City not later than June 10, and payment of fee of $1 at time of deposit an extension of the return limit may be obtained to leave Atlantic City not later than June 14

Thus far the Western Passenger Association has granted only a rate of one and one third fare for the round trip, but the matter has been taken under further consideration and it is hoped that a half fare rate will be secured in the territory covered by this association also

The Transcontinental Passenger Association has granted a one first class 30 day fare for the round trip, tickets to be on sale May 20 and 21 Final arrangements of this association with the eastern passenger associations have not yet been made The Transcontinental Passenger Association covers the western part of the United States, including all of the Pacific Coast

NEW MEMBERS

List of new members of the American Medical Association for the month of March, 1907

ALABAMA

Christopher F D Isney
Glass, E T Birmingham
Goodman D W, Mobile
Grout S E, Bessemer
Huggins Jacob Newbern
Manning J T Lineville.
McKee H C Hartselle
Moseley D C Faunsdale
Odom, J I Littleton
Riley H C Coffee Springs
Shropshire C W Birmingham
Smith R L Palos.
Thomas J R. Albertville
Whiteside J M Anniston

ARIZONA

Neff Mary L. Oracle.
Powell C S Benson
Southworth H T Prescott

ARKANSAS

Hamm F F Texarkana
Lee F A Mena
Longino H A Magnolia
Nall R P Armorel
Powell J W Springfield
Roop J W Crossett.
Stevens C D Magnolia
Taylor I S Crossett.
Wilson G L. Hermitage.
Wommack W E Hermitage

CALIFORNIA

Bacon C E Los Angeles
Bishop T W Pasadena
Cohen Albert San Francisco
Cook W V Pasadena
Decker C W Los Angeles
Ford J C Rocklin
Frick D J Los Angeles
Henrikson Gustav Sacramento
Johnson W S Los Angeles
McCoy Alva D S Pasadena
McNaughton J A Los Angeles
Miller A V Oakland
Roth L T Los Angeles
Silvia Clara A Gilroy
Thompson T G Oakdale
Trewhella J S Rivera
Walker Agnes San Francisco
White A H Crockett
White S T Redding

COLORADO

Abrahams H E Denver
Carlson B W Cheyenne Wells
Edwards G M Denver
Lee H C Tabasco
Moore Clara M Denver
Stilwell H R Denver
Weller Miles Denver

CONNECTICUT

Bissell J S Torrington
Meeks H A Meriden
Minor G M Waterford

DISTRICT OF COLUMBIA

Jewett, H M Washington
Marshall Collins Washington

FLORIDA

Carswell S T Citra
Pollock W A J Pensacola
Prince J M Live Oak
Willis J M Williston

GEORGIA

Adams R P Bethlehem
Cunningham F M. Macon
Giddings C C Atlanta
Johnson C F Griffin
Johnston F C Walden
Kilpatrick A J Augusta
Michel H M Augusta
Oglesby C F Waycross

IDAHO

Davis W N Wardner

ILLINOIS

Allen, W G Chicago
Bishop E H, Chicago
Brooks E W, St Elmo
Brode W D Chicago
Butler Jacob East St. Louis
Brimble-Combe Wm Carmi
Davies R H Chicago
Dunavan L W Chicago
Ellis W L Grayville
Evans Florence L East St. Louis.
Goldenburg Michael Chicago
Gulbrandsen G H Chicago
Hill C E Aviston
Johnson L M Arrowsmith
Lippert J East St Louis
Lyford W H Port Byron
Macauley T D Elgin
Mackellar O W Chicago
Mandel Milton Chicago
Marten John Tolono
McCaw J A Herscher
Nagel F E Chicago
Palm Milton Dwight
Robinson J W New Berlin
Ross G W Watseka
Sawyer C F Chicago
Secor W L La Grange
Troutt J J, Nashville
Will H C Chicago

INDIANA

Clements H T Convers
Gudgel J F Cynthiana
Kohr T W Hammond
Long J B Indianapolis

IOWA

Anderson H N Scranton
Charlton A J Bennett
Knowles J Logan
Lang C C Altoona
Mantz M Alace Des Moines
Shuler Anne M Davenport
Thomas L A Des Moines

KANSAS

Brookhart H H Scammon
Heidrick D I Welda
Hull R W Kincaid
Jack W G Chautauqua
McDowell W H Iola
Reid C T Carona
Townsend C R Centralia.
Walker G W Chetopa
Wuttke F F Halstead

KENTUCKY

Bethel J T Henderson
Brown R K. Louisville.
Elmore R R Louisville
Rodman H D Bardstown

LOUISIANA.

Frater F J Shreveport

MARYLAND

Gaddess H W Baltimore

MASSACHUSETTS

Bruce H M Brookline
Conroy F C Andover
Craves J C Jr Boston
Jones Everett Brookline
Levy F J Boston
Lloyd H D Boston
MacOdrum Angus Boston
Maguire T H Dorchester
May J S Boston
Thurber M T Dorchester
Wolcott W W Natick

MICHIGAN

Breece R C Ada
Charles H L, Paw Paw
Hensel R D Detroit
MacIntyre Donald Muskegon Heights
MacNett F J Traverse City
McCormick F T Detroit.

Murphy N D Bangor
Skinner C E Howell
Stroud H A. Douglas
Whiteshield C. F Harbor Springs

MINNESOTA.

Christie G R Long Prairie.
Ehmke W C Willow River
Hare E R Minneapolis
Hopkins Mary P St. Peter
Hunt H E St. Paul
Kane J P Hibbing
Williams Robert Minneapolis

MISSISSIPPI

Carroll G F Biloxi.
Cuming H I Gloster
Holloman T B Jr Itta Bena.
Hood B S Bond
Smithson W W Jackson
Sweaney J H Durant.

MISSOURI

Brooks W W Stanberry
Bruehl Julius Kansas City
Bryson E H Bethany
Chambers J C Schell City
Chilton J A Van Buren
Chilton J W Lilington
Chipp J K. Newhampton
Clemens J R St. Louis
Cloonan Martin Ruble.
Cross R O Kansas City
Dean J McH, St Louis
Evans A L Bonne-Terre.
Fritts O C Gerald
Hamel G T Kansas City
Hamilton H D Kansas City
Hinchey Frank St. Louis
Klie G H C St Louis
Lee L E Weatherby
Luedde W H St Louis
Miller D P Kansas City
Martin J W Kirksville
Moore J H Centerville
Nesbitt E I Sheridan.
Proud W C Oregon
Raithel G H St Louis
Rice E D Lucerne.
Rice, William Kansas City
Scott, W B, Bucklin
Sparr E D Amsterdam
Stewart B S Bethany
Wetzel N M. Jameson
Williams A W Ridgeway
Yeater H P Maysville

MONTANA.

Carroll J V Fort Benton

NEBRASKA

Brooks E B Pawnee City
Elliott W M. Newcastle
Frink F L Newman Grove
Kavanaugh Peter Schuyler
Martin E W Fremont
Minnick C E Indianola
Woods James, Schuyler

NEVADA

Keen E R Black Horse.

NEW JERSEY

Duncan O B Haledon
Maclay J V Paterson
Van Dyke J S Hackensack

NEW MEXICO

Lauson A F Anthony

NEW YORK.

Acken T M New York City
Bassin J N New York City
Bartlett C. R Boonville
Blake J Eddy Brooklyn
Blattels, S R. New York City
Brennar R L. New York City
Brodie, R L. Albion
Carr W L. New York City
Chiarulli I S Syracuse
Cramp W C New York City
Darling B C, Washingtonville
Dingman J Clarence Spring Valley
Downey J M Brooklyn
Emans J Seymour New York City
Fahnestock Ernest New York City
Farr F H New York
Fendler Amelia M New York City
Field F H New York City
Foshury L D Endicott
Frasch W F Rochester
Glosser H H Buffalo
Griswold Henry New York City
Hargrove I C New York City
Jewett W A Brooklyn
Irving Peter New York City
McCollom W F Brooklyn
McDonald Ellice New York City
O Leary D V Jr Albany
Rulison L B Watervliet
Schwerdtfegen O M New York City
Sheehan T J G Buffalo
Sherman F A. Watertown
Stewart D H New York City
Taves A. W New York City
Weismann F H New York City
Winfield J M Brooklyn
Young C D Rochester

NORTH CAROLINA.

McNatt H W Maxton

NORTH DAKOTA

MacKay A R Bottineau

OHIO

Butt S E Nelsonville
Halter M. V Akron
Kerr I J Cleveland
Patrick B W Toledo
Powers H W North Amherst
Wright W E Newark

OKLAHOMA

Phillips Lewis Seward
Share A L Kingfisher

OREGON

Mingus Everett Marshfield

PENNSYLVANIA

Bartle H J Philadelphia
Graves I S Jermyn.
Hanna D B Stoneboro
Koons P R Mechanicsburg
Onstott Elmer Saltsburg
Patterson R V Philadelphia
Rivenburg S W Clifford
Schock H D Philadelphia
Snively R D Philadelphia

RHODE ISLAND

Abbott Edmund Providence
Beck, H P Newport

SOUTH CAROLINA

Pryor S W Chester

SOUTH DAKOTA

Ashcroft, F E Deadwood
Skogen T T Flandreau
Wright O R Huron.

TENNESSEE

Sneed J W Brentwood

TEXAS

Allen G W Jr Yorktown
Bean B F Kirbyville
Boyce, W A Commerce
Conall E S Center
Cowan W B Dialville
Ellis G S Sherman
Gregg F C Manor
Guenther J G Moultan
Herrington I C Orange
Hooper R B, Van Vleck
Johnston L S Atlanta
Leonards H New Braunfels
Mahaffey M L. Sabinal
Mantooth Lafayette, Lufkin
Martin B J Leggett.
McLaughlin F P Austin
Moore R W Ft Worth.
Pearce, A G Orange.
Plotts F B Anderson
Taylor J S Cookville
Whiteside M. H E Timpson
Williams F D Nacogdoches

UTAH

Donohen W D Salt Lake City
Raley F H Salt Lake City
West T J Salt Lake City

VIRGINIA

Price, L. T Richmond

WEST VIRGINIA.

Burden Frank Capon Bridge
Goodman H L. Thaver
Holsberry F S Bower
Matheny B F Meadowbrook

WISCONSIN

Allen W J Beloit
Brown R C Milwaukee
Dirks C B Wauwatosa
Lueck C W La Crosse
Morley I F Viroqua
Oakland H C Milwaukee
Thewalt W B Loy Sippi

WYOMING

Tonkin A B Riverton

PHILIPPINE ISLANDS

Pond Arlington Cebu
Warmsley W C Tuguegarao
Cagayan

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed Queries for this column must be accompanied by the writer's name and address but the request of the writer not to publish name or address will be faithfully observed

BOOKS ON URANALYSIS

EUREKA CAL. March 20 1907

To the Editor —Please name a text book on uranalysis that explains the clinical significance and method of determination of total nitrogen urea nitrogen and ammonia nitrogen in urine—the nitrogen partition Will you also give a ready and rapid method for determining the (1) total nitrogen (2) the nitrogen as urea and (3) the ammonia nitrogen the ammonia coefficient?

JOHN J GAYNOR M D

ANSWER —The following text books give the methods of determining the total nitrogen and contain discussions in regard to the distribution of the urinary nitrogen in urea ammonia and other nitrogenous compounds Boston's Clinical Diagnosis Croftan's Clinical Urinology v Jaksch's Clinical Diagnosis and most text books on physiologic chemistry

The best method of determining the total nitrogen is that of Kjeldahl as it enables the operator to perform a number of determinations at the same time If the necessary apparatus is once properly installed the method is rapid The method is based on the following principle (quoted from Croftan) The nitrogenous constituents of the urine on boiling with concentrated sulphuric acid are destroyed and all the nitrogen that is not in direct combination with oxygen is converted into ammonia the latter combines with the sulphuric acid and goes into solution as sulphate of ammonia The bodies that contain nitrogen in direct combination with oxygen are present in such small quantities (and occasionally not all) that they may be neglected for practical purposes The acid solution of ammonium sulphate is treated with hot soda lye and the ammonium thus liberated caught in a measured quantity of normal acid and the excess of acid titrated back from the amount of ammonia formed the nitrogen of the urine can readily be calculated The quickest clinical method for determining the urea nitrogen is the hypobromite method of Hüfner (Knop) The apparatus required for this determination is simple and the method is rapid of execution It is based on the principle that sodium hypobromite in alkaline solution decomposes urea into nitrogen carbon dioxid and water The carbon dioxid that develops is absorbed by the alkaline solution (soda lye) while the nitrogen passing through this solution can be caught in a suitable measuring apparatus and thus determined The ordinary Doremus apparatus is constructed on principles similar to the Hüfner apparatus however for estimating the ammonia coefficient or for any clinical work that is even remotely expected to approach accuracy the apparatus of Doremus is quite useless

The ammonia of the urine is as a rule determined according to the method of Schloesing this is not the most accurate method but it is the simplest and the quickest of execution and generally suffices for clinical purposes It is based on the following principle If the urine is treated with lime water most of the ammonia it contains is released from its combinations with other radicles If the urine containing the lime water is placed under a glass jar with a dish of concentrated sulphuric acid then the liberated ammonia will be caught by the latter and the degree to which the sulphuric acid has been neutralized by the ammonia after 24 or 48 hours can then be determined by titration As a rule the direct determination of the ammonia is not performed but the total so called ammonia nitrogen of the urine and this includes the nitrogen bound in substituted ammonia (amino and amido etc compounds) radicles This ammonia nitrogen is determined from the difference between the total urinary nitrogen and the urea nitrogen for the bulk of the nitrogen that is not combined as urea is present in the urine in the form of substituted ammonia compounds

CUBAN ITCH

JEFFERSON Ohio March 21 1907

To the Editor —There have been local reports of a condition styled Cuban itch I have failed to see references to it in Journals If such a condition exist what are its characteristics? If not what malady I being confused W J THATCHER

ANSWER —After the Spanish American war in 1898 an epidemic of smallpox of a very mild character prevailed extensively throughout the northern United States By many this epidemic was attributed probably correctly to the introduction of the disease returned soldiers from Cuba and the Philippines In consequence of the mildness of the nature was not recognized and it was variously Philippine measles etc While the disease pox it is probable that the same term has exanthemata and to other forms of skin di

SOLUTION OF CELLULOSE

Ocala Fla March 28 1907

To the Editor —Kindly give formula for ammoniated copper solution which is used for making a solution of cellulose. Yours very truly W H Powers, M.D

Answer —Ammoniated copper solution or Schweitzer s reagent was formerly prepared by leaving copper turnings partially immersed in ammonia with access of air but it is better made by precipitating copper hydroxid from a cold solution of copper sulphate by adding an excess of caustic soda The well washed precipitate is then dissolved to saturation with ammonia On treatment with the resultant solution cellulose becomes gelatinous and on agitation gradually dissolves forming a viscid solution which may be filtered after dilution with water

TAPTARLITHINE

Memphis Tenn

To the Editor —I enclose an ad of Tartarlithine from the inside cover of the *Literary Digest* It speaks for itself. It has been my impression heretofore that McKesson & Robbins conducted an ethical business Certainly they have advertised Tartarlithine extensively to physicians Louis Leroy

Loma Linda Cal.

To the Editor —Can you tell me the composition of Tartarlithine, advertised to the laity by McKesson & Robbins? What is there in it which would check the discharges of postnasal catarrh? George K. Abbott

Answer —The two letters quoted are specimens of several received on the same subject during the last few months We have had Tartarlithine examined by two chemists whose reports indicate that it is an effervescing preparation composed of approximately 20 per cent of carbonate of lithium and about 80 per cent of tartaric acid. Thus it is simply another of the hundreds of lithia preparations on the market offered for the cure of rheumatism This in spite of the fact that scientific investigation and clinical experience have demonstrated that lithia is of very little if any use in that disease While the advertisement carries the idea that Tartarlithine is a product of the Tartarlithine Company and that McKesson & Robbins are simply the selling agents we are informed that the business is owned by McKesson & Robbins who under this style manufacture a remedy for rheumatism In regard to the information asked for by our correspondents we would suggest that they write to McKesson & Robbins who will undoubtedly gladly reply We would especially suggest to Dr Abbott that he ask the firm how a mixture of lithia and tartaric acid will check the discharges of postnasal catarrh?

THE BIOCHEMICAL JOURNAL.

Denver March 30 1907

To the Editor —Please inform me who are the publishers of the *Biochemical Journal* and tell me if possible the cost of a single copy Bernard Oettinger M.D

Answer —The *Biochemical Journal* is published by the Biochemical Department Johnston Laboratories University of Liverpool England The American agent is G E Stechert, 129 West Twentieth Street New York City This is a new journal only in its second year and not as yet very widely distributed. The cost of each issue varies with the size of such issue

The Public Service

Army Changes.

Memorandum of Changes of stations and duties of medical officers U S Army week ending April 6 1907

Borden Wm C surgeon granted three months leave of absence to take effect about June 15

Kilbourne E D asst surgeon relieved from duty at General Hospital Presidio San Francisco and ordered to Fort Brady Mich

Talbott, E. M. asst surgeon ordered to proceed from Fort Leavenworth Kans to Fort Oglethorpe Ga for duty with the Second Squadron 12th Cavalry at that post for duty to accompany command to the Jamestown Ter-Centennial Exposition

Borden Wm C surgeon relieved from duty at General Hospital Washington Barracks D C to take effect on expiration of leave of absence and will then proceed to Manila, P I for duty

Munson E. L. surgeon relieved from duty at General Hospital Fort Bayard, N M and ordered to Fort Sheridan Ill., for duty

Rockhill E P asst surgeon relieved from treatment at Army General Hospital Presidio of San Francisco and will proceed to General Hospital Fort Bayard, N M for observation and treatment

Crosby Wm D surgeon relieved from duty at Vancouver Barracks Washington and ordered to the U S Soldiers Home Washington D C as attending surgeon, and will report about June 14 1907

Arthur Wm H surgeon relieved from duty as attending surgeon U S Soldiers Home Washington D C and will proceed to Washington Barracks D C., and assume command of the General Hospital at that post on June 15

Moseley F P asst surgeon general granted leave of absence for one month and twenty five days

Heard George P asst surgeon detailed as a member of the Army retiring board to meet at Denver, vice Col E. B Moseley asst surgeon general hereby relieved.

Snyder C R. asst surgeon is relieved from duty in the Philippines Division to take effect at such time as will enable him to comply with order and will proceed by first available transport sailing from Manila after June 1 1907 to San Francisco and on arrival will report by telegraph to the Adjutant General of the Army for further orders

Sweazey V E asst. surgeon will render the necessary attendance at Fort Preble Me. during the absence of Contract Surgeon Whitney at Fort McKinley Me

Hart James W contract surgeon ordered to accompany troops from Washington Barracks D C to target Camp Annapolis Md. and remain on duty at that camp

Wall F M contract surgeon granted sick leave of absence for two months

Tyler George T contract surgeon relieved from duty at Fort Monroe Va. and ordered to West Point N Y for duty

Pomeroy John L. contract surgeon ordered from New York to Fort Wright, Wash. for duty

Navy Changes

Changes in the Medical Corps U S N for the week ending April 6 1907

Jones E. L asst. surgeon, detached Medical School Washington D C. April 3 and ordered to Naval Hospital Mare Island Cal. May 20

Robnett A. H asst surgeon detached from Medical School April 3 to Naval Station San Juan

Lee, A. E asst. surgeon, to Naval Medical School Washington, D C

Allen A H asst. surgeon detached Medical School April 3 to duty with Marines at Camp Columbia Cuba.

Kuder W S., asst. surgeon detached Medical School April 3 ordered to *Minnesota*

Haynes J I asst. surgeon detached Medical School April 3 ordered to the *Virginia*

Ransdell R C asst. surgeon detached Medical School, April 3 ordered to the *Maine*

Ames M. H asst. surgeon detached Medical School, April 3 ordered to the *New Jersey*

Kaufman J B asst surgeon detached Medical School ordered to the *Tennessee*

Smith H L. acting asst. surgeon detached Medical School, April 3 to Naval Recruiting Station, Omaha Neb

Steadman W G., acting asst. surgeon detached Medical School April 3 ordered to Naval Recruiting Station Providence, R. I.

Baker M. C acting asst surgeon detached Medical School April 3 to Navy Yard Norfolk, Va.

Longabaugh R I acting asst. surgeon detached Medical School April 3 to Annapolis Hospital

Huff, E. P acting asst. surgeon detached Medical School April 3 to Proving Grounds Indian Head, Md.

Donaldson M. acting asst. surgeon detached Medical School, April 3 to Naval Recruiting Party No 3

Minter J M asst surgeon from Medical School to Guam Station

Cohn I F Raison T W Winn C K. Downey J O Butts, H. from school to Asiatic Station

Flint J asst.-surgeon from Medical School to Sanacao Hospital

Dollard, H L acting asst. surgeon from school to Newport Hospital

Odell H F surgeon from Newport Hospital, to Naval Hospital Washington D C and to duty on course of instruction at the U S Naval Medical School

Carton W M. surgeon detached from Naval Hospital Washington D C ordered home 2 weeks leave thence to *Ohio*

Moore, J M surgeon detached Norfolk Hospital to Naval Recruiting Station. Minneapolis Minn.

Plummer R W P A. surgeon detached Naval Recruiting Station Chicago Ill to duty on course of instruction at the U S Naval Medical School Washington D C

Baker M W P A surgeon detached Naval Hospital New York to Naval Hospital Portsmouth N H

Freeman G F P A. surgeon detached Naval Hospital Portsmouth N H to duty in attendance on course of instruction at the U S Naval Medical School Washington D C.

McLean N T., asst surgeon detached from Navy Yard Boston Mass to Naval Recruiting Station Chicago

Miller J T acting asst. surgeon detached from Naval Recruiting Station Minneapolis Minn to course of instruction at Naval Medical School Washington D C

Balch A. W P A surgeon detached Naval Medical School Washington D C. April 5 ordered to Naval Hospital Cavite P I sailing from New York N Y April 20 stopping en route at London England Hamburg Germany and other points for special duty

Tolfree H M P A surgeon detached from the *Connecticut* to the *Dolphin*

McDonnold P E asst. surgeon detached *Dolphin* to the *Connecticut*

Baker M W., P A surgeon detached Naval Hospital New York N Y to Naval Hospital Boston.

Public Health and Marine Hospital Service.

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 2 1906

Brooks S D surgeon relieved from duty at San Diego Cal and directed to proceed to Los Angeles and to assume charge of the service at that port relieving Surgeon J O Cobb

Cobb J O., surgeon relieved from duty at Los Angeles and directed to proceed to Cairo Ill and to assume command of the service at that port relieving Surgeon G M Culteras

Culteras G M surgeon relieved from duty at Cairo Ill and directed to proceed to Mobile Ala and to assume command of the service at that port relieving P A Surgeon Edward Francis

von Ezdorf J H., P A surgeon assumed command of New Orleans Quarantine Station April 1 1907

Fox Carroll P A surgeon leave of absence granted Dec. 28, 1906 for 14 days revoked

Francis Edward P A. surgeon relieved from duty at the Marine-Hospital Mobile Ala and directed to assume command of the Quarantine Service at that port April 1 1907

Robertson E McG Asst surgeon relieved from duty at Philadelphia and directed to proceed to Reedy Island Quarantine Station reporting to the medical officer in command for duty and assignment to quarters

Salmon T W asst surgeon granted leave of absence for 4 days on account of sickness from March 23 1907

de Valin Hugh asst. surgeon relieved from duty at Reedy Island Quarantine Station and directed to proceed to New Orleans Quarantine Station reporting to the medical officer in command for duty and assignment to quarters

Jackson J M Jr acting asst. surgeon granted leave of absence for 10 days from March 27 1907

McCormac, J T acting asst. surgeon granted leave of absence for 30 days on account of sickness from Feb 9 1907

McConnell F I acting asst surgeon department letter of Feb 26 1907 amended so as to grant acting asst surgeon McConnell 22 days leave of absence from Feb 25 1907 instead of 30 days

Safford M V acting asst surgeon directed to proceed from Boston to Westborough Mass for special temporary duty on completion of which to rejoin his station

Story H C acting asst surgeon granted leave of absence for 30 days from May 1 1907

BOARDS CONVENED

A board of medical officers was convened to meet at Philadelphia April 4 1907 for the physical examination of an officer of the Revenue-Cutter Service Detail for the board Surgeon J M Gassaway chairman P A Surgeon T Clark recorder

A board of medical officers was convened to meet at Wilmington N C April 8 1907 for the physical examination of an officer of the Revenue Cutter Service. Detail for the board P A Surgeon C H Lavinder chairman

Health Reports

The following cases of smallpox, yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended April 5 1907

SMALLPOX—UNITED STATES

California San Francisco March 16-23 2 cases

Florida Duval County Jacksonville March 23-30 1 case Hillsboro County 6 cases Polk County 4 cases Suwanee County 1 case

Georgia Augusta March 26-April 2 6 cases

Illinois Chicago March 23 30 2 cases Galesburg 3 cases

Indiana Indianapolis March 24-31 3 cases Marion March 1 31, 11 cases

Iowa Clinton March 16 23 2 cases

Kansas Kansas City March 23 30 1 case

Louisiana New Orleans March 23-20 15 cases 1 death

Massachusetts Boston March 23 30 1 case.

Michigan Detroit March 2 9 11 cases

Mississippi Gulfport March 18-25 1 case (1 imported)

Missouri St Joseph March 2 9 23 cases 1 death St Louis March 23 30 2 cases

New Jersey Hoboken March 23 30 1 case Newark 2 cases

North Carolina Charlotte March 23-30 1 case

Ohio Cleveland March 22 29 1 case.

Texas Houston Feb 3-March 30 76 cases

Washington Seattle March 17 24 1 case Spokane March 16 23 18 cases

SMALLPOX—FOREIGN

Canada Nova Scotia Colchester County March 25 present Pictou County present British Columbia Vancouver March 16-23 1 case Manitoba Winnipeg March 16 23 1 case

China Hongkong Feb 2 16, 27 cases, 26 deaths Shanghai Feb 9 23 5 deaths

Ecuador Guayaquil March 2 16 8 deaths

France Dunkirk Feb 6-March 8 12 cases 5 deaths (imported) Marseilles March 6 13 still present Paris March 9 16 12 cases 2 deaths

Germany Bremen March 9 16 3 cases Metz and vicinity March 3 16 33 cases

Great Britain Manchester March 9 16 2 cases.

India Bombay Feb 27 March 5 3 deaths Calcutta Feb 16-23 48 deaths Madras Feb 23 March 1 1 death

Italy Turin March 2 9 1 case

Mexico Aguas Calientes March 16-23 3 deaths Mexico Mexico Feb 16-March 2 29 deaths

Portugal Lisbon March 9 16 12 cases

Russia Odessa March 2 9 32 cases 6 deaths Riga May 9 16 6 cases St Petersburg Feb 23 March 9 3 cases 3 deaths Warsaw Feb 9 16 4 deaths

YELLOW FEVER

Africa Dahomey Grand Popo Jan 15 present.

Brazil Para March 2 9 4 cases 2 deaths

Ecuador Guayaquil March 2 16 21 deaths

Mexico Vera Cruz, Paraje Nuevo March 2 9 1 case 1 death

CHOLERA.

India Calcutta Feb 16-23 42 cases Madras March 1 3 deaths Rangoon Feb 16-23 4 deaths

PLAGUE.

Hawaii Honolulu March 2 9 1 death

PLAGUE—FOREIGN

China Hongkong Feb 8 16 1 case 1 death Niuchwang Feb 6 2 deaths

Egypt Assiout Province March 1 7 16 cases 7 deaths Girgeh Province March 1 7 46 cases 34 deaths Ismalia March 4 1 case 1 death Keneh Province March 2 7 23 cases 16 deaths

India General Feb 16 23 29 279 cases 4 242 deaths Bombay Feb 27 March 5 306 deaths Calcutta Feb 16-23 27 deaths Rangoon Feb 16 23 55 deaths.

Marriages

SAMUEL STEINER M D, to Miss Rebecca E Killian both of Philadelphia, March 24

WILLIAM JOHN MALOY, M.D, to Miss May Hanley, both of Muncie, Ind, recently

ROBERT M MILLER M D to Miss Lena Jenks, both of Bogard, Mo, March 20

FREDERIC KAMMERER, M.D to Miss Ida Knapp both of New York City, March 23

ROBERT C BRADLEY M D to Miss Charlotte Marie Perkins both of Peoria, Ill, March 30

LEANDER HOWARD SHEARER M D, to Miss Grace T Parker, both of New York City, April 6

JAMES ROBERTSON DAWSON, M.D, to Miss Theresa Mushat both of Birmingham, Ala, April 3

EDWARD GILLETTE MARTIN, M.D, Detroit, Mich, to Miss Helen Marian Fraser of Petrolea, Ont, March 27

Deaths

Frank Swartzlander, M.D University of Pennsylvania, Department of Medicine, Philadelphia 1863, in 1862 anatomist of the Military Hospital Philadelphia, where he made all the postmortem examinations until his graduation a year later in March, 1863, appointed assistant surgeon of the Seventy fourth Pennsylvania Volunteer Infantry, chief surgeon of the field hospital of the Third Division, Eleventh Army Corps, at the battle of Gettysburg later assistant surgeon of volunteers and in charge of the auxiliary military hospital at Savannah Ga., dean of the medical profession of Doylestown Pa a member of the state and county medical societies died suddenly at his home, March 31 from acute gastritis, aged 65

Joseph Gilbert Bemis, M D College of Physicians and Surgeons in the City of New York 1865, Bennett College of Eclectic Medicine and Surgery, Chicago 1883 a member of the American Medical Association, assistant surgeon of the First Minnesota Volunteer Infantry during the Civil War a practitioner of Chicago for 24 years, died at his home in that city April 1, from tuberculosis, after an illness of four months, aged 62

William Henry Drummond, M D University of Bishop College, Faculty of Medicine Montreal 1884, famous for his poems on the French Canadian habitants, professor of medical jurisprudence at Bishop College and a prominent practitioner of Montreal died in Cobalt Ont., where he was manager of the Drummond mine from cerebral hemorrhage, April 6 after an illness of five days, aged 51

William Oglesby Sweeney, M.D Bellevue Hospital Medical College, New York City, 1864 one of the oldest and most prominent practitioners of Lexington Ky and for a number of years instructor in chemistry at Hocker College who retired from practice 20 years ago on account of blindness died at his home in Lexington, March 27, after a prolonged illness aged 66

Lewis L Pollock, M.D University of Maryland School of Medicine Baltimore 1856 a surgeon in the Confederate service during the Civil War thereafter a practitioner in Boston and for the last 18 years a resident of East Weymouth Mass died in Bellevue Hospital New York City March 25 from gastritis after an illness of one week, aged 70

Alfred George Mays, M.D University of Michigan Department of Medicine and Surgery, Ann Arbor, 1878 for 25 years a prominent practitioner of Leadville Red Cliff and Victor Colo who moved to Nevada City Cal on account of his health last year died in that city from cerebral hemorrhage March 3 after an illness of two days aged 5[illegible]

Nicholas Lafayette Campbell, M D College of Physicians and Surgeons in the City of New York 1845 one of the founders of the New York Academy of Medicine in 1847 a veteran medical officer of the Mexican and Civil War since his retirement a clerk in the health department of New York City died in that city March 29 aged 84

George Warren Bartow M D College of Physicians and Surgeons in the City of New York 1873 a member of the American Medical Association and a veteran of the Civil War during which he served in the Fifteenth New Jersey Volunteer Infantry died at his home in Three Bridges N J March 28 from paralysis aged 63

William J Wroth, M D University of Maryland School of Medicine, Baltimore, 1852, for a number of years resident physician of the Marine Hospital, Baltimore, and founder of the Rush Medical Club at the University of Maryland died at his home in Baltimore, April 3, from intestinal obstruction, after a short illness, aged 77

Clarence Edward Avery Buckley, M.D Halifax Medical College, Medical Faculty of Dalhousie University, Halifax N S, 1904, formerly interne at the Victoria General Hospital, and then a practitioner at Thorburn, died at the residence of his father in Halifax, March 27, from tuberculosis, after a prolonged illness, aged 24

Thomas Wight, M.D College of Physicians and Surgeons in the City of New York, 1864, a member of the state and county medical societies, and one of the oldest practicing physicians of Delaware County, N Y, died at his home in Andes, March 31, from injuries sustained in a runaway accident three days before, aged 73

Allen Castle Simonton, M D Northwestern University Medical School, Chicago, 1865, a veteran of the Civil War, a resident of Washington since 1870, and for several years chief surgeon of the Great Northern System, died at his home in Seattle, March 26, from heart disease, after an illness of two years, aged 60

Young A Matthews, M D *Shelby Medical College, Nashville,* Tenn, 1859, president of the Cass County (Texas) Medical Society, who served throughout the Civil War as surgeon of the Eighteenth Texas Infantry, C S A, died at his home in Atlanta, Texas, Nov 20, 1906 from heart disease, aged 69

Samuel R. Richardson, M D Medical Department, Victoria *College, Toronto, 1871, coroner of York County, Ontario,* for several years, and for more than 30 years a practitioner of Eglinton, died in North Toronto, March 26, from pneumonia complicating typhoid fever, after a long illness, aged 64

Robert Stuart MacGregor, M.D New York University Medical College, 1897, a member of the state and county medical societies, and a member of the staff of St Bartholomew's Clinic and of the New York Polyclinic, died at his home in New York City, March 23 from pneumonia, aged 38

George W Pettit, M D Cleveland Medical College, Medical Department of Western Reserve Medical College, 1853, said to have been the oldest practitioner of Mahoning County, Ohio, died at his home in Petersburg, March 8, from concussion of the brain, due to a fall four days before, aged 79

Guido Spitzy, M.D Faculty of Medicine, Paris, France, 1870, who saw service under the English government in Egypt and India, but for the last three years and a half has been in practice at Los Banos Cal, died at his home March 15, from tuberculosis after a prolonged illness, aged 60

Harry E Burdett, M D Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons Kingston, Ont, 1886, for 20 years a practitioner of St Paul, Minn, died in a hospital in that city, March 27, from heart disease, after an illness of several weeks, aged 45

Mitchell Starr, M.D Starling Medical College Columbus, Ohio, 1863, assistant surgeon of the Seventy fourth Ohio Volunteer Infantry throughout the Civil War and one of the oldest practitioners of Van Wert County, Ohio, died at his home in Shenandoah March 27, aged 86

John B Callan, M D *Chattanooga (Tenn) Medical College* Medical Department of Grant University, 1905, a promising young physician of De Kalb County formerly a practitioner of Bridgeport Jackson County, Tenn, died in New Mexico, from tuberculosis, March 23

Robert Colman Arnette, M D Louisville (Ky) Medical College 1873 a veteran of the Civil War in the Confederate service and a practitioner of Monticello, S C, died at the residence of his brother in law, near Ridgewood, S C, March 20 from nephritis aged 59

George W Matthews, M D Medical Department of the University of Louisiana, New Orleans, 1872, a veteran of the Mexican War, and a member of the Texas legislature in 1875 died at his home in Garden Valley, Texas, March 28, from influenza, aged 80

Charles F Reilly, M.D College of Physicians and Surgeons, Baltimore 1902 of Woonsocket, R I school committeeman of the town of Blackstone R I died at the home of his parents in that city March 31, after an illness of several weeks aged 34

Florentine O Reeve, M.D Cleveland University of Medicine and Surgery 1894 for some time a professor in his alma mater and superintendent of schools of Brooklyn Ohio died at his home in Cleveland, March 29, from pneumonia, aged 55

James E O'Malley, M.D New York University Medical College, 1888, a member of the staff of St Luke's Hospital, Newburgh, N Y, died at his home in that city, after a long illness, consequent on a fall several years ago, March 27, aged 46

John W Stoner, M D Cleveland University of Medicine and Surgery, 1888, secretary of the board of education and board of health of North Baltimore, Ohio, died in a hospital in Cleveland after an operation for cancer, March 22, aged 47

Frances Van Cleve Fuller, M.D Woman's Medical College of the New York Infirmary, New York City, 1884, a retired practitioner of Brooklyn died at her residence in that city, March 27, from pneumonia, after a short illness, aged 56

D David Fisher, M D University of Vermont College of Medicine, Burlington, 1883, for the last eight years justice of the peace, died at his home in Kersey, Pa, March 24, from heart disease after an illness of two weeks, aged 50

James Fletcher Winsell, M.D Ohio Medical College, Cincinnati, who had retired from practice more than 25 years ago, died in Redding, Cal, Nov 9, 1906, from paralysis, after an illness of five days, aged 81

John W Culley, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1873, died at his home in Salt Lake City Utah, March 21, from pneumonia, after a short illness, aged 67

William McCallum, M D College of Physicians and Surgeons of Chicago, 1886, for many years a practitioner of Gladstone, Mich, died at the Northwestern Hospital, Minneapolis, Minn, March 28, aged 52

Berry Meek, M.D St Louis Medical College, 1857, a pioneer physician of Holt County Mo, *died at State Hospital No 2,* St Joseph, where he had been an inmate for nearly ten years, March 27, aged 80

Lawrence F Berry, M.D Jefferson Medical College, Philadelphia, 1905 an interne at the Philadelphia Hospital, died at that institution from erysipelas, March 29, after an illness of five days, aged 25

Samuel D Bickel, M D University of Pennsylvania, Department of Medicine Philadelphia, 1895, at one time warden of the Atlantic County prison, died at his home in Atlantic City, N J, March 26

Robert Fuller Eubank, M.D Baltimore Medical College, 1896, of Ottoman, Lancaster County Va, a member of the state and county medical societies, died March 26, after a brief illness, aged 42

William H Dwight, M D College of Medicine, Syracuse (N Y) University 1876, cashier of the State Bank of Goddard, Kan, was found dead from gunshot wound, a mile east of Goddard, April 3

John Mattauer Winfree, M.D *Medical College of Virginia* Richmond, 1889, of Richmond, Va, died at the home of his father in law in Raleigh, N C, March 31, after an illness of two years

Ethelda M. Teeters Widemann, M D University of Wooster, Medical Department, Cleveland 1895, died at her home in Cleveland, Ohio from septicemia, after an illness of one week, aged 35

William R. Stout, M D Kentucky School of Medicine, Louisville, 1881, formerly a practitioner of Covington, Ind, died at his home near North Vernon, Ind, March 15, after a prolonged illness

George G Ware, M.D Jefferson Medical College, Philadelphia, 1857, died at his home in Stanton, Tenn, March 25, from injuries received in a runaway accident several days before

Francis E Watts, M D Hahnemann Medical College and Hospital Chicago, 1883, died at his home in Olean, N Y, March 27, from hemorrhage of the lungs, after a short illness, aged 47

Ernest S Empey, M.D College of Medicine of the University of Nebraska Omaha, 1905, formerly of Torrington, Wyo died at his home in Scott's Bluff, Neb, January 28, from tuberculosis

George H Duncan, M.D McGill University Medical Faculty, Montreal 1892, for some time a practitioner of the Yukon, died at his home in Victoria, B C, Dec 2, 1906, aged 44

Louis N Hilleary, M D New York University Medical College, New York City, 1880 formerly a practitioner of Burlington, Iowa, *died at his home in Poway, Cal, aged 54*

Lewis U Singer, M.D Jefferson Medical College Philadelphia, 1881, one of the first settlers of Clearfield, Iowa, died at his home in that place, from pneumonia, March 25

Joseph N Knight, M D Boston University School of Medicine, 1883, died at his home in Cliftondale Mass, March 30, from tuberculosis, after an illness of a year, aged 45

James S Sullivan, M D Medical School of Harvard University, Boston, 1894, died at his home in Randolph, Mass, March 23, from pneumonia, after a brief illness, aged 41

Henry B Evarts, M.D Eclectic Medical Institute, Cincinnati, 1871, died at his home in Grand Rapids, Mich, March 31, after an illness of two days, aged 61

Floyd Clendenen, M D Bennett College of Eclectic Medicine and Surgery, Chicago, 1874, died at his home in La Salle, Ill, April 4, from pneumonia, aged 69

John MacDonald, M.D Jefferson Medical College, Philadelphia, 1879, died at his home in Chatham, N B, Dec 12, 1906, after a long illness, aged 55

John Munro Campbell, M D McGill University Medical Faculty, Montreal, 1869, died at his home in Greenpoint, Brooklyn, N Y, April 2, aged 70

Joel Y Lynch, M.D Indiana Eclectic Medical College, Indianapolis, 1887, died at his home in Rosedale, Ind, April 2, after a long illness, aged 55

Thomas A Skillman, M D New York University Medical College, New York City, 1878, died at his home in New Brunswick, N J, aged 53

Warren F Barksdale, M.D University of Louisville Medical Department, 1855 died at the home of his daughter in Hardy, Miss, March 9, aged 77

Frank Riley, M.D St Joseph (Mo) Medical College, 1882 died suddenly at his home in St Joseph, April 1, from cerebral hemorrhage, aged 48

Jasper N Taylor, M D Vanderbilt University, Medical Department Nashville, Tenn, 1871, died at his home in Lynchburg, Tenn, March 27

Belton O Bennett, M.D Medical College of the State of South Carolina, Charleston, 1876, died at his home in Greer's, S C, January 17

John Batemen Deere, M D Memphis Hospital Medical College, 1898, of Sandy Springs, Ark, died in Little Rock recently, aged 39

Robert Farries, M D Long Island College Hospital, Brooklyn, 1865, died at his home in New York City, March 31, aged 72

William E Pillsbury, M D Dartmouth Medical School Hanover, 1873, died at his home in Milton Mills N H, February 10

G A. L Payne, M D McGill University Medical Faculty, Montreal, 1906, died at Montreal in January, from typhoid fever

William C Christian, M D St Louis Medical College, 1865, died recently at his home in New Bloomfield, Mo, aged 76

Samuel Clarke, M.D Jefferson Medical College, Philadelphia, 1899, died at his home in Philadelphia, March 29

Deaths Abroad

F J Herrgott, M D, professor of obstetrics at Nancy since 1872, died March 5 aged 93 Besides his numerous publications on gynecologic obstetric and surgical subjects, he wrote a history of obstetrics, translating Siebold's work and bringing the history down to date In his eighty third year he published a translation of the celebrated treatise on diseases of women by Soranus of Ephesus Herrgott also published a work entitled "The Chamberlin Family and the Discovery of the Forceps" He is said to have been the first physician who systematically made a practice of watching over the health of infants born in his service giving each mother a louis (84) out of his own pocket when she had raised a healthy infant following his directions

A. von Weismayr, M.D, first director of the great Alland sanatorium in Austria but for the last few years chief of a Vienna hospital one of the collaborators on the *Wien Klin Rundschau* died March 12 aged about 40 He was the first medical man in Austria to devote his efforts and research exclusively to the question of tuberculosis and his popular pamphlet "The Essence of Tuberculosis" has been distributed by thousands He succumbed a victim to the disease to which he had devoted his life An article from his pen on the prognosis of tuberculosis is still appearing in serial form in the *Rundschau*

A Petragha, M D dean of the physicians at Rome Italy died March 10 aged 91

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION ETC

A Move in the Right Direction

A bill of more than ordinary importance has been introduced into the General Assembly of the state of New York by Mr Merritt It is entitled, "An act to provide for holding a convention within the state of New York of delegates to be appointed by the governors of the several states for the purpose of devising and recommending to the legislatures thereof uniform laws, and making an appropriation therefor" The bill, which is a short one, authorizes the governor of the state of New York to appoint three delegates and to invite the governor of each other state in the union to do the same These delegates are to meet during the coming October at some place in the state of New York and are to consider and recommend to their respective legislatures the enactment of uniform laws in the matter of life and fire insurance divorce, labor public utilities, etc The expense of holding this convention and also the actual traveling expenses of the various delegates will be paid by the state of New York, and the bill calls for an appropriation for this purpose

It is to be hoped that this bill will become a law and that the convention provided for therein may be held Among the subjects that may well be considered by the convention is the examination and licensing of physicians and the regulation of the practice of medicine Under the federal Constitution such matters as those enumerated in the bill come under the head of functions not surrendered by the states to the general government Consequently, they are under the jurisdiction of the states There is not only no reason why every effort should not be made to obtain uniformity of legislation along these lines in the various states but there is every reason why an enlightened and intelligent civilization should demand uniform legislation on these subjects based on rational investigation and sound economic principles From the standpoint of our profession it may be said that uniformity in laws regulating the practice of medicine is the most effective means of bringing about reciprocity For this reason it is to be hoped that should such a convention materialize the governors of the various states will see fit to appoint as one of the three delegates from each state a progressive member of the medical profession There is no state that can take the lead in such a matter with a better grace or more authority than the Empire State It is to be hoped that this bill will lead to definite and tangible results

The Weak Points in Organization

Dr W P Wherry Fort Wayne, Ind writes

"The medical profession in the United States seems now to be very well organized Physicians are grouped in county district state and national associations the chief difference between these being that a wider and wider circle is necessary to circumscribe them in the order named Practically the work of every group is identical Papers are read and discussed and much useful postgraduate instruction is afforded To a small extent, the social or fraternal feature is cultivated but the highly important subject of economics—the legislative business interests especially—is neglected or attended to in such a perfunctory manner that injury instead of benefit results We do not find the collateral profession of lawyers making a similar mistake

The weak point of the organization of medicine is the state society There is no good reason why it should be a mere *facsimile* of the county society enlarged Under the constitution of the United States the whole legislative regulation of the profession belongs to the several states This is a reason why the state society in its public sessions should give not of its time to the business interests of its members and give the time devoted to scientific matters as these are fully taken care of in the county district and national [illegible] the state society would include in its [illegible]

subjects of the sections into which the American Medical Association's work is divided, the rest of the time might be devoted to medical economics The laws that concern the profession are generally promoted by a small number of persons, and the practitioners affected by them have no opportunity to express any opinion on legislative projects that may be injurious After all, the bulk of the medical societies consists of general practitioners, with whose business interests the specialists who are prominent at the meetings have no sympathy Contract work, insurance work public services and the collection of fees for attendance on private patients are matters deserving much attention at the meetings of the state societies Instead of being relegated to committees, these things should form a main part of the work of the general sessions If this change were adopted very few practitioners in a state would be found outside of the state association of the school to which they belong"

Public Meetings by County Societies

The advantages to be gained by county societies holding occasional public meetings is interestingly discussed by Dr J M Allen, of Liberty, Mo, in a recent number of the *Journal of the Missouri State Medical Association* As a means of securing favorable legislation and appropriations for sanitary purposes such meetings would prove invaluable, and Dr Allen recommends that at least one such meeting should be held annually He also emphasizes the importance of the education of public school teachers on matters of sanitation and hygiene and suggests the appointment, in each county, of a member of the county society to deliver to the school teachers, at their county institutes, addresses on public school hygiene and other matters along medical lines This last suggestion is practical as well as valuable and there is no reason why it can not be carried out in every county in which medical organization exists Every teachers' institute and organization would gladly welcome such an arrangement The influence for good which would thus be exerted both on the teachers and their pupils can not be over estimated.

Reasonable Fees for Insurance Examination

The position of the profession on the life insurance examination question was recently the subject of editorial comment in the *Interview*, a paper published in New York The writer says, in part

"Physicians have begun war on the old line life insurance companies, resisting the proposed cut of medical examination fees from $5 to $3 In view of the extremely high cost of even moderate living nowadays, and in view of the fact that doctors, who are properly fitted for their profession, have had to spend much cash and long years of laborious study, we fully believe that they are perfectly justified in demanding a reasonable fee for making thorough examination of applicants for life insurance, and we do not believe that $5, on an average, is any too much compensation for a skilled physician for the time required to make a trustworthy examination"

What Is Contract Practice?

A correspondent writes "What is the meaning of the words 'contract practice' as used in paragraph 4 of 'Why You Should Join a County Medical Society'?" The paragraph referred to reads "Because it makes possible among physicians better business conditions and methods, including fee bills, defense and avoidance of contract practice, etc" As these matters lie within the jurisdiction of the county society, the construction placed on the terms used therein also lies within the same province Each county society has a right to decide for itself what constitutes contract practice In a country as large as ours, with interests so varied and local conditions so diversified, a definition, at once inclusive and exclusive, is difficult, if not impossible The objectionable features of contract practice are the payment of a definite amount of compensation for an indefinite amount of service the payment, for services rendered during the life of the contract of an amount far below that which would be received for the same services if they were paid for in detail and the competition engendered between physicians which leads them to underbid each other, thus causing dissensions, etc

Medical Societies in St Louis Cooperate

Representatives of the medical societies of St. Louis have organized "the Joint Medical Council" for the purpose of improving the management of the city hospitals and dispensaries At present, the health commissioner and the superintendents of the various public benevolent institutions in the city are appointed by the mayor The council has recommended the organization of a board of trustees, to be chosen at municipal elections and to consist of six members, beside the mayor as an *ex officio* member, this board to have control of the city hospitals and associated dispensaries, as well as of all of the public charitable institutions now in the city or that may be established in the future It further recommends that this board of trustees appoint, from the physicians of the city of St. Louis, a representative medical staff, which shall have charge of the medical and surgical work in the public institutions

The Council is composed of 21 representatives from the following societies St. Louis Medical Society, Medical Society of City Hospital Alumni, St Louis Homeopathic Medical Society, St Louis Hahnemannian Club St Louis Children's Hospital Alumni Association, St Louis Eclectic Medical Society, St Louis Dental Society, St Louis Surgical Society, St Louis Surgical Club, St Louis Obstetrical and Gynecological Society, and the Veren Deutscher Aerzte

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Legislation Notes

Dr G N Streeter, Brooklyn, N Y, writes regarding the passage of the medical practice act in Delaware

"Why can not such legislation be brought about in every state, and thus banish the Christian science healers, osteopaths and others who have not complied with the arduous and expensive requirements exacted of members of the medical profession? Why should we be discriminated against in this manner by the different states? Will the apathy of doctors continue until our profession is thrown from the place to which it is entitled in the community by those who play on the delusions and credulity of the gullible public? Why can not the American Medical Association, at its next meeting, appropriate money and appoint committees to bring this matter before the legislatures of the different states and also discuss the matter in each publication of THE JOURNAL?"

Dr L. R. Markley, Bellingham, Wash, writes regarding the work of the legislature in that state

"Our state legislature has just adjourned and, as usual, the wants of the profession were not given as much consideration as we had hoped for The coroners' bill was defeated The watershed bill was also killed, this was a meritorious measure designed to give better control of the water supply The tuberculosis bill and all medical practice bills were also killed We succeeded in getting a fairly good pure milk and pure food bill passed, also a bill relating to vital statistics It seems strange that we have to work so hard to get bills that are solely for the public good adopted by the state legislature At every turn 'private interests' are butting in and, as they have money to spend, they usually win, until public interest is sufficiently aroused to compel attention"

Dr B D Black, secretary of the New Mexico Board of Health, reports the passage by the legislature of house bill No 53, which regulates the practice of medicine and provides for a medical examining board Dr Black says "It is a compromise bill and is not what we asked for or expected but it is such a material improvement over our old law that we feel that we can congratulate ourselves"

Pottawatomie County (Okla) Medical Society reports a membership for 1906 of 32 During the year it held 57 meetings, with an average attendance of 15 The society is now meeting every Saturday night If such work can be done in one of our new western states, what might not be possible in the older and more settled portions of the country, where it is much easier for physicians to attend and to support a medical society?

Book Notices

Diseases of the Nervous System Resulting from Accident and Injury. By P Bailey A M. M D Clinical Lecturer in Neurology Columbia University New York City, etc. Cloth. Pp 627 Price, $5 00 New York D Appleton & Co 1906

The tendency to see a causal relationship between two events merely because one follows the other in point of time seems to be deeply rooted in the human mind. This applies not only to the ordinary phenomena of Nature, but also particularly to matters relating to medicine Were such faulty deductions limited to the laity the profession might easily overlook it, at least so far as medical matters are concerned, but unfortunately the same weakness is but too prevalent among physicians In no particular is this so manifest as it is in the tendency shown by some to attribute to some antecedent injury all of the subsequent ills which may befall an individual Owing to the great lack of knowledge, on the part of many physicians, of the anatomy, physiology and pathology of the nervous system, the relationship which exists between injury and nervous diseases, is but little understood. The appearance of this work, therefore, by one of such wide experience, is very timely

The volume is divided into three parts 1, On "Organic Effects of Injury to the Nervous System," 2, on "Functional Effects of Injury," and 3, on "Medicolegal Considerations" There is an introductory chapter on the general methods of examination for the actual injury, which is good and should be carefully studied. Then follow chapters on actual injuries to the various parts of the nervous system, particular attention being given to the prognosis of such injuries Almost half of the volume is devoted to the "Functional Effects of Injuries," which indicates how frequent and important is this class of disorders In this connection we make the following quotation which is, alas, but too true 'The influence of suggestion by physicians is frequently traceable in the causation of traumatic neurasthenia and of traumatic hysteria In many cases it seems as though these disorders owe their appearance, in a large part at least, to the fact that the patients have been told by physicians that they may some day have trouble with the spinal cord as a result of the accident The examples of the bad effects of such ill advised statements are numerous"

The chapters on 'Personal Injury Claims," "Expert Witnesses," "Malingering," 'Substitution of Origin," "Simulation," etc., are extremely interesting and instructive The great prevalence of personal injury suits of all kinds against corporations and individuals the tendency toward industrial insurance and the enactment of more rigid indemnity laws, make it incumbent on every physician to become more thoroughly informed on the subject of injuries and their results Therefore, this work can be most heartily recommended

A Treatise on Surgery By G R Fowler M D Examiner in Surgery Board of Medical Examiners of the Regents of the University of the State of New York etc. 888 Illustrations and 4 Colored Plates all original Cloth Pp 722. Price $15 00 net. Philadelphia W B Saunders Co 1906

A glance at the table of contents of this book shows that an ambitious effort has been made to cover the entire field of surgery, the design being encyclopedic and the work in its entirety constituting a memorial to the ability, skill and industry of the lamented Fowler, whose individuality is clearly stamped on its pages In a work of such broad scope, undertaken by a single author, it is to be expected that some shortcomings will be found and it is to be regretted that a second edition will not have the benefit of revision by its distinguished author More than one half (428 pages) of the first volume is devoted to the principles of surgery and minor surgery The descriptions of disease processes are, on the whole, fairly accurate but some noteworthy contradictions are met in this connection The book opens with the subject of inflammation which, from the viewpoint of the surgeon he very properly defines as "that series of changes in the tissues which take place as the result of injury plus infection" Later we find aseptic wound healing described as regenerative in definition Again, the statement Fever is an increased tissue metamorphosis, the essential result of pathogenic bacteria This influence may be exerted directly by the presence of the micro organisms themselves or indirectly by the products of decomposition and the presence of ptomains" will hardly meet the requirements of modern surgical pathology and is flatly opposed on the next page by the remarks on aseptic wound fever and experimental fever resulting from intravenous infusion of salt and other solutions The section on laboratory aids in surgical diagnosis and prognosis is clear, full and practical as are also those on anesthesia and bandaging We note in the section devoted to operative technic, otherwise well written and of direct practical value that the circular method of amputation is favorably described and that, in the flap operation preference is given to transfixion over incision The old fashioned method of draining through the suture line is recommended instead of the modern plan of establishing drainage through a puncture in the most dependent portion of the stump The remaining portion of the two bulky volumes, devoted to regional surgery, is well arranged for reference, beautifully illustrated thoroughly indexed and though dealing but briefly with many subjects is in general a reliable guide to the modern practice of surgery

Manual of Prescription Writing with a Full Explanation of the Methods of Correctly Writing Prescriptions. By Matthew D Mann A M M D Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo Revised by F Cox Mann M D Sixth Edition Revised and Enlarged Cloth Pp 232 Price $1 00 New York and London G P Putnam's Sons 1907

This little manual covers a range of subjects important to the practical physician, and it aims to supplement current medical teaching in some of the details in which it is admittedly deficient The ordinary course is followed, the parts of a prescription, the weights and measures commonly used, the language and abbreviations and grammatical construction being described with some detail The different classes of preparations, with examples of prescriptions for powders, pills mixtures liniments, and the various forms of medicine intended for external use are then described A discussion of doses the metric system the combination of medicines and incompatibilities completes the work The utility of the work is unquestioned and it will repay careful study by any one who appreciates the need of elegance and accuracy in the important matter of prescription writing The book has been revised to accord with the latest revision of the Pharmacopeia, but we regret to note that this revision has overlooked some verbal errors which are unfortunate in a work intended to teach verbal and grammatical accuracy Pepsinæ for pepsini and glycerinæ for glycerini occur as well as oleum theobromæ for oleum theobromatis These errors, which are of importance in a work like that under consideration will doubtless be corrected in the next edition

Text Book of Ophthalmic Operations By Harold Grimsdale M D F R C S Ophthalmic Surgeon to St George's Hospital and Filmore Brewerton F R C S Ophthalmic Surgeon to the Metropolitan Hospital Cloth Pp 349 Price $5 00 net. Chicago W T Keener & Co 1907

This is a compilation of eye operative procedures by two well known English ophthalmologists In addition to the description of the operations an introduction is given covering the necessary anatomy physiology and surgical anatomy of the parts to be operated on The literature has been fully reviewed and a condensed account of the various operations, with the name of the originator, is given References to the original point they are clear and practical, which is the main requirement The illustrations are all schematic and done in black and white While they might be improved from an artistic standpoint, they are clear and practical, which is the main requirement

National Association for the Study and Prevention of Tuberculosis Transactions of the Second Annual Meeting Washington D C May 16 to 18 1906 Paper Pp 638 Lancaster Pa. The New Era Printing Co

The forty-one papers included in this volume many of which have been published elsewhere discuss a large variety of topics relating to tuberculosis and furnish a body of reading on questions of great importance to every physician. Abstracts of many of the report of the meeting in The Journal in 1906 pp 1720 and 1[illegible]

AN INTRODUCTION TO PHYSIOLOGY By William Townsend Porter M D, Associate Professor of Physiology in the Harvard Medical School Cloth Pp 587 Price $2 50 Philadelphia J B Lippincott Company, 1906

This is a collection of fundamental and accessory experiments in several fields printed in abbreviated form for temporary use Dr Porter evidently recognizes that the student is best taught by observation, as he bases his studies on experimental results, the student being required to perform each experiment This makes the study of physiology practical and far more profitable than when taken up didactically The subject is presented in an excellent manner

OBSTETRICS FOR NURSES By J B DeLee, A.M M.D, Professor of Obstetrics Northwestern University Medical School etc Second edition thoroughly revised and enlarged Cloth Pp 510 Price $2 50 net. Philadelphia W B Saunders Company, 1906

Though this book is intended primarily for nurses, it will be of value to medical students and to recent graduates, as the duties of a nurse often devolve on physicians, especially during the first few years of practice The technic in normal and abnormal cases is fully described and illustrated The illustrations, many of which are from photographs, are excellent The book contains much valuable information regarding the so called minor points, mention of which is generally omitted from the larger works

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION Atlantic City June 4-7

Medical Assn of State of Alabama Mobile April 16
Florida Medical Association Tampa, April 17
Medical Association of Georgia Savannah April 17
Med Soc of the State of California Del Monte April 16-18
South Carolina Medical Association Bennettsville, April 17 19
Medical and Chir Faculty of Maryland Baltimore April 23-25
Amer Confed Reciprocating Exam & Lic. Bds Chicago April 30
Association of American Medical Colleges Washington, May 6
A r Assn of Genito-Urinary Surgeon Washington May 7 9
American Therapeutic Society Washington May 4 7
Am Assn of Pathologists and Bacteriologists Washington May 7 9
American Gynecological Society Washington May 7 9
Amer Climatological Association Washington May 7 9
Amer Laryngological Association Washington May 7 9
Amer Medico-Psychological Association Washington, May 7 9
American Ophthalmological Society Washington May 7 9
American Orthopedic Society Washington May 7 9
American Pediatric Society Washington May 7 9
American Assn of Physicians Washington May 7 9
American Surgical Association Washington May 7 9
Nebraska State Medical Association Lincoln May 7 9
Texas State Medical Association Mineral Wells May 7
Utah State Medical Association Salt Lake City May 7 8
New Mexico Medical Association, Las Cruces May 8 9
Kansas Medical Society Kansas City, May 8-10

MEDICAL SOCIETY OF THE MISSOURI VALLEY

The President, Dr O Beverly Campbell, St Joseph, Mo, in the Chair

Nephrolithiasis Urica

DR. A. C CROFTAN, Chicago, presented a very full discussion of the prevention and treatment of this condition He said that surgery can do no more than remove the calculi or establish drainage in infected cases, but it can not, in any way, influence the factors that determine the formation of uric acid calculi, that is, surgery can not cure nephrolithiasis The treatment should be directed toward preventing the deposit of urates in the lower urinary passages, and with this end in view there must be considered the dilution of the urine, the total amount of uric acid and sodium chlorid in the urine, and the reaction of the urine The patient should drink freely of water, not necessarily mineral waters, because it is the water and not the mineral it may contain that is of value The liquid intake should exceed by far the original liquid output in the urine

The diet should take into consideration the nuclein content of the food, and nuclein containing organs should be eliminated from the diet Dr Croftan said that albumin *per se* is in no way a source of uric acid It is very important not to underfeed the patient Dr Croftan advised the administration of alkalies, particularly of calcium carbonate, but advises caution in its administration in infected cases

Surgery of the Thyroid

DR. ALEX HUGH FERGUSON, Chicago, in the oration on surgery, reviewed the indications for surgical intervention in diseases of the thyroid gland, the diagnosis of enlargements of the gland, and the methods of procedure for removal of the gland which he has found to be most valuable He said that, generally stated, surgical intervention is not called for until other measures have been tried and failed. A study of 300 cases of thyroidectomy showed that in 77 per cent dyspnea was the principal indication for operation, deformity in 24 per cent, dysphagia in 8 per cent, tracheal stenosis and discomfort in about 3 per cent. He has operated on 58 patients In 44 cases of simple or cystic goiter there was no mortality In 12 cases of exophthalmic goiter the mortality was 25 per cent The causes of death were thyroidism in 2 cases and collapse of the trachea in one case Four of the patients were in very poor condition and two of these died

Gastroptosis

DR. ROBERT T SLOAN, Kansas City, Mo, advocated general hygienic measures, diet, mechanical support and rest in bed, the foot of the bed being elevated slightly, in the treatment of gastroptosis

Treatment of Morphin Habit.

DR. W F WAUGH, Chicago, stated that, inasmuch as toxin retention is the disease, elimination is the remedy Withdrawal symptoms, he said, are an evidence of autotoxemia By eliminating the toxins as fast as they are poured into the system there will be no withdrawal symptoms He has treated a considerable number in this manner with great success

Non-operative Treatment of Gastric Diseases

DR. F B TURCK, Chicago, said that cases which manifest disturbance of function, but where no stenosis is found, do not demand surgical treatment, but rather physiologic methods of treatment, that is, dietetic, physical and mechanical Operative treatment is indicated when there is obstruction of the stomach outlet, as in benign superficial stenosis or early malignant growth, when the diagnosis is uncertain and characterized by progressive loss of weight and when all symptomatic treatment fails

Pelvic Abscess

DR W T ELAM, St Joseph, Mo, advocated hysterectomy by the two stage method in case of multiple abscesses of the uterus, vaginal drainage in walled off abscesses, salpingectomy or oöphorectomy, when demanded, as secondary measures In cases of chronic pyosalpinx the abdominal route is preferred

Hernia.

DR D C HILTON, Lincoln, Neb, classifies hernia as follows (1) Hernioida protrusa and (2) hernia vera Among the first are cases of protrusion invested by the mucocutaneous membranes of the body through an orifice of the mucous or cutaneous surface

The second class, hernia vera, comprises the congenital and acquired hernia This classification is based on the conception that the body is a tube, the continuous covering of which is epithelium, which spreads over the general inner and outer surfaces of the tube, and also into all diverticula and recesses

Experience with Morphin Hyoscin Compound

DR. F E. WALKER, Hot Springs, S D, reported 75 cases in which he made use of this compound with most excellent results No untoward symptoms were observed and no evil effects were noted as the results of large dosage

Dangers from Tuberculous Milch Cows

Dr. S R Towne, Omaha, stated that evidence is accumulating supporting the theory that infection of the lung occurs not by inhalation, but by the ingestion of bacilli, and that there exists an intercommunicability of all types of tuberculosis, the bovine being the most active He emphasized the greater susceptibility to tuberculosis of the child, and pointed out that milk must be reckoned with as a probable source of infection in tuberculosis He said that any system of prophylaxis which ignores the tuberculous milch cow must be considered incomplete.

Treatment of Exophthalmic Goiter with Electricity

Dr. R. D Mason, Omaha, reported one case in which the main feature of treatment consisted of the introduction into the thyroid of iodin by cataphoresis The patient, aged 45, had manifested symptoms for two years Treatment was instituted six months after the onset of the disease and was given twice a week for six weeks Strychnin was the only agent given internally Improvement was marked and steady from the beginning of the treatment The circumference of the neck finally was two inches less than when the patient was first seen, although the pulse rate was still about 100, and the pulse was quite irregular The tremor was much improved, there was no pain, the eyes were normal, and insomnia, from which the patient had suffered severely, was relieved

Other Papers Read

The following papers were also read

"Gall Bladder Disease by Dr A L Wright, Carroll Iowa 'Specialism by Dr P I Leonard St. Joseph, Mo 'Some Views on Appendicitis by Dr C O Thienhaus, Milwaukee Pulsating Exophthalmos Treated by Excision of the Superior Ophthalmic Vein, by Dr H Gifford Omaha Renal Calculi ' by Dr B A. Mc Dermott, Omaha 'Vesicovaginal Fistula, by Dr F A. Long Madison Neb and Anterior Suspension of the Uterus, by Dr F B Dorsey Keokuk Iowa

The annual meeting will be held in Council Bluffs, Iowa, Sept 5, 1907

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Regular Meeting, held Feb 7, 1907

The President, Dr. Wilmer Krusen, in the Chair

Chorea During Pregnancy

Dr Collin Foulkrod reported a case of a patient in whom chorea occurred in the course of five successive pregnancies, possibly causing the death of three or four of the fetuses By careful watching he succeeded in carrying the woman to term and delivering her of a living child Bromid and chloral were administered

Diagnosis of Early Pregnancy

Dr. Ellice McDonald examined 100 cases at various weeks of pregnancy The duration of the pregnancy was calculated from the date of the last menstruation The pelvic signs were the only ones closely studied Jacquemien's sign of the violet hue of the vagina was found to be of the most value after the eighth week It was first noticed at a spot just below the urethra Blush of the cervix was noted in much the same percentage of cases as Jacquemien's sign It was also noted that in the early stages of pregnancy there is a marked difference in the ease with which the body of the uterus can be moved on the cervix and the cervix on the fundus This was usually best noted about the fifth week and is usually so marked that the body and the cervix may be doubled on themselves and brought together, the empty bladder and vaginal walls alone separating them This sign was best obtained by placing the palmar tips of the vaginal fingers posteriorly and below the end of the cervix and the fingers of the abdominal hand on the top of the fundus The bladder must be empty and there must be no contraction of the uterus The sign is easily obtained after slight practice It may be obtained before there is thinning of the lower segment but is caused by the same conditions which produce Hegar's sign

Dr. Barton Cooke Hirst spoke of the possibility of gross error of diagnosis in early pregnancy and of the necessity of methodical examination of patients The sign to which attention had been called in Dr McDonald's paper he has always grouped with Hegar's sign, making no distinction between the softening of the lower segment and the thinning Among the signs of early pregnancy on which he depends, the softening of the cervix holds an important place The eccentric hypertrophy of the cervix he also regards as an important sign Without this he does not think pregnancy is possible, and by its absence it is often impossible to say that pregnancy could not exist in a certain case If, on the contrary, the cervix is much broader and softer than normal, pregnancy is at least probable. The change of color in the genital tract he regards as a valuable symptom when obtainable It, however is lacking in a considerable percentage of the early cases, the very cases in which the diagnosis is most difficult and most desirable One fact about the change of color which is seldom mentioned is that as pregnancy advances the blue or purple discoloration of the genital canal is sometimes absent, but he has never seen a case in which, if this blue discoloration is absent, there is not a transformation of the pink of the mucous membrane of the introitus and vestibule into a bright scarlet

Dr Edward P Davis said that in an examination and diagnosis of early pregnancy a systematic procedure is of the utmost importance The head, face and neck of the patient should be investigated to determine the enlargement of the thyroid, alterations in the pupils, abnormalities in the color of the face and the presence or absence of abnormalities in the nose, throat and mouth In some normal pregnancies the thyroid is said to be slightly enlarged, while in pseudocyesis the thyroid is often considerably diseased The action of the heart is readily excited during pregnancy and hemic murmurs are often present in the early months One of the most significant symptoms of early pregnancy in gouty and neurotic women, he said, is a generally irritable condition of the mucous membrane of the nose In one such case the condition at once disappeared after abortion Dr Davis said that he has been accustomed to search for softening in the lower uterine segment and to consider this as strongly suspicious of pregnancy In examinations this phenomenon is usually associated with enlargement of the uterine body and the two are taken together as practically constituting Hegar's sign Disturbances in metabolism are present in early pregnancy Color signs in the genital canal he regards as suggestive rather than decisive When the examination of the uterus gives several signs significant of pregnancy and the general examination of the patient coincides, the patient is probably pregnant, but a positive assertion should be withheld until positive evidence of fetal life is obtained

Dr Richard C Norris believes that the positive diagnosis of early pregnancy will always be a very difficult matter in spite of the most advanced refinements in diagnostic means One of the most practical points is to examine the patient at intervals and repeatedly before coming to any conclusion in doubtful cases Since women differ greatly in anatomic peculiarities such for example as the flexibility or eccentric enlargement of the cervix it is necessary to reserve even a presumptive diagnosis until the patient is seen on more than one occasion He confesses that he has yet to make an early positive diagnosis by means of any of the early diagnostic signs and has had to wait until time and other signs made the diagnosis positive

He has studied many cases of early pregnancy for Hegar's and Braxton Hicks' signs and believes that the personal equation of the examiner is an important factor and that a part which may feel soft one day may not at the next visit He feels that Dr McDonald has done some careful work in exploiting flexibility or thinning of the lower uterine segment as an early sign of pregnancy Personally he has not felt justified to conclude that there is thinning of the lower uterine segment without recto vaginal examination The sign which has helped him most is the change in the shape of the uterus presenting what is termed a jug shaped uterus

Dr. Charles P Noble feels that at or before the tenth week the clinical signs mentioned seldom assist in a definite diagnosis The jug sign" of pregnancy has been most helpful to him in the early diagnosis of pregnancy In his experience Hegar's sign is of little value before the twelfth week

DR GEORGE M. BOYD emphasized the necessity of repeated examinations He has found Hegar's sign of value and also the change in the shape of the upper segment of the uterus He referred to two cases which had come to his notice in which the diagnosis of uterine and ectopic gestations had been confounded

Pubiotomy

An abstract of Dr Richard C Norris' paper appears in THE JOURNAL, April 13, page 1298

DISCUSSION

DR. CHARLES P NOBLE has not done this operation and personally sees no advantage in sawing through bone to cutting through the symphysis In Heidelberg he learned of a case of fatal hemorrhage after operation

DR. BARTON COOKE HIRST has done two pubiotomies during the last two weeks In the first case he had occasion for much enthusiasm, but the second gave him much trouble and anxiety The first was a patient whom he had delivered five years before by Cesarean section. After etherization the cervix was dilated with Bossi dilators, a Pomeroy bag inserted and the patient laid aside, and at the end of an hour and twenty minutes she was again anesthetized and the operation done, resulting in the easy extraction of the child and the subsequent well being of both mother and child.

In forty eight hours later he had an illustration of almost all the disadvantages of pubiotomy in a woman in labor for thirty six hours The first disadvantage encountered was from the woman's obesity There was a rachitic pelvis and the child was much over size, and the operation was attended with various other difficulties Four days after delivery the woman developed symptoms of infection The patient recovered Dr Hirst believes that for the general practitioner who must operate in insuperably obstructed labor Cesarean section is the operation of choice

Fibroma of Uterus

DR GEORGE ERETY SHOEMAKER said that no arbitrary limit can be placed in the reduction of hemoglobin, beyond which hysterectomy is unjustifiable if demanded to save life. A was shown, removed by supravaginal hysterectomy from a single woman aged 35, whose hemorrhage had reduced her hemoglobin to 25 per cent. Her mucous membranes were almost white She had shortness of breath and tinnitus and was subject to asthmatic attacks The tumor, multinodular, interstitial, weighing about three and a half pounds, was hard and irregular, invading every portion of the uterus Intravenous salt solution injected during operation, great care in conserving body temperature and attention to detail brought about a normal convalescence, the highest pulse being 98, and that immediately after operation

Another uterus was shown with a large intramural degenerating fibroma The patient was aged only 29, but had been greatly debilitated both by hemorrhage and the absorption of toxins from the tumor The hemoglobin was 62 and was, therefore, not the real index of the amount of systemic change. The tumor was grayish white, with areas shading to dark gray Macroscopically it resembled sarcoma, but the microscopic report was fibroma

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FIRST COUNCILOR MEDICAL SOCIETY OF MICHIGAN

Third Annual Meeting, held March 28, 1907

DR. J H. CARSTENS, Detroit, in the Chair

The third annual meeting of the First Councilor Medical Society, Michigan, comprising the county societies of Lenawee, Macomb, Munroe, Oakland, Washtenaw and Wayne, was held March 28, 1907, at the Hotel Cadillac, Detroit. About 125 sat down at the banquet The toastmaster was Dr David Inglis, Detroit. Dr A W Chase Adrian, replied to the toast "The General Practitioner," Dr J D Riker, Pontiac, replied to "The Doctor's Price," Dr A M. Barret, Ann Arbor, to "The Relation of the Psychopathic Hospital to the General Practitioner," and Dr V C Vaughan, Detroit, to "The Specialist."

The following papers were read at the afternoon session

The Advantage of Laparotomy Over Tapping in Ascites

DR GEORGE DOCK, Ann Arbor, urged incision, instead of paracentesis, in all ascitic cases in which the diagnosis is uncertain, in order to avoid the slight risk involved in paracentesis, and to provide the best opportunity for making a certain diagnosis and applying surgical measures, if indicated, immediately

DISCUSSION

DR. T A McGRAW, Detroit, said that he has incised many ascitic patients who were in very dangerous condition, without shock or other bad result An advantage of incision over puncture is that incision can be followed by drainage, if needed, as in tuberculous peritonitis

DR. C S OAKMAN, Detroit, said that ascites usually indicates a serious cause If cardiac or renal, the cause can usually be found without exploration If hepatic, diagnosis without operation is more difficult If inflammatory, tuberculous or neoplastic, incision is needed not only for diagnosis, but the early surgical therapy that incision makes possible is of great value.

DR. J H. CARSTENS, Detroit, said that he has not done a paracentesis of the abdomen for twenty years, because he regards it as dangerous and nearly always less advantageous than incision But paracentesis may occasionally be advisable in order to facilitate palpation, and by this means to learn where to make the exploratory incision, above or below the umbilicus

Importance of Complete Extirpation in Tonsil Operation.

DR. E. T MORDEN, Adrian, said that after partial removal of the tonsils there is better opportunity for infection than before, although the obstructive symptoms may be relieved So called regrowth means incomplete removal

DISCUSSION

DR. D M CAMPBELL, Detroit, said that he is in the habit of leaving some of the tonsil in order that the part left might exercise the probably beneficial function of the tonsils It is impossible to extirpate the tonsil with a tonsillotome, a punch or scissors must be used afterward for complete removal.

DR. J V WHITE, Detroit, said that if the condition is inflammatory and recurrent, and the lacunæ extend deep, total enucleation is indicated

DR. A P OHLMACHER, Detroit, said that hypertrophy of the tonsil might indicate the status lymphaticus, on account of which the anesthetic and shock of the tonsil operation might prove serious

DR. WILLIS S ANDERSON, Detroit, said that the reasons for removal of the tonsils are either mechanical or absorptive If mechanical, partial removal may be sufficient, if, however, removal of the tonsil is indicated to prevent absorption, the normal function of the tonsil is lost, and the tonsil should be removed completely The atrophy of the faucial pillars, he said, is due to needless damage done the pillars in the enucleation, and not to complete removal of the tonsil. The tonsil should be dissected off the pillars accurately In children partial removal may be all that is needed or safely possible The remote possibility of the status lymphaticus should not prevent the operation A bent probe is a useful means of investigating crypts and pockets, and crypts and pockets in the tonsil are of more importance than simple hypertrophy

DR. EMIL AMBERG, Detroit, said that the normal tonsil has no needed function

DR. R. S ROWLAND, Detroit, has observed in several children more symptoms from the tonsil after the tonsil operation than before it

Empyema.

DR. R. Y FERGUSON, Pontiac, emphasized the importance of early diagnosis by the aspirating needle, especially in children, and the need for prompt drainage by rib resection

DISCUSSION

DR. A. P OHLMACHER, Detroit, reported two cases of empyema that had been strikingly benefited by artificial autogenous vaccination

Dr. Kenneth Gunsolus, Detroit, believes that it is not always necessary to resect a rib in children. In adults, how every rib resection seems always wise.

The following cases were exhibited "Sciatica Due to Sprain of Sacroiliac Joint," by Dr W E Blodgett, Detroit, "Case of Rhinolith," by Dr J W White, Detroit, "Exophthalmic Goiter," by Dr C. M. Hagen, Detroit Papers were read on "Opsonins and Bacterial Vaccines," by Drs E C Miller and E M Houghton, Detroit.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

California State Board of Medical Examiners San Francisco April 16 Secretary Dr Chas L. Tisdale, San Francisco Cal.

Missouri State Board of Health St. Louis and Kansas City April 16-18 Secretary Dr J A B Adcock, Warrensburg

Illinois State Board of Health, Great Northern Hotel Chicago April 17 19 Secretary Dr J A. Egan Springfield.

Kentucky State Board of Health City Hall, Louisville, April 23 Secretary Dr J N McCormack, Bowling Green

Georgia Regular Board of Medical Examiners Capitol Building Atlanta, April 30-May 1 Secretary Dr E R. Anthony Griffin

Texas State Board of Medical Examiners, Austin April 30-May 2 Secretary Dr T T Jackson, San Antonio

Texas Eclectic Medical Board Dallas, about April 25 Secretary Dr L S Downs Galveston

South Dakota January Report.—Dr H. E McNutt, secretary of the South Dakota State Board of Medical Examiners, reports the written examination held at Sioux Falls, Jan. 9 10, 1907 The number of subjects examined in was 12, total number of questions asked, 90, percentage required to pass, 75 The total number of candidates examined was 13, of whom 9 passed and 4 failed Twenty two reciprocal licenses were granted at this examination The following colleges were represented

College.		Year Grad.	Per Cent
PASSED			
Northwestern University		(1906) 78, 78 *	89 7
College of P and S Chicago	(1905) 82.9	(1906) 76 9†	85
University of Iowa		(1906)	81.6
Lincoln Med. Coll		(1906)	81 3†
Jefferson Med Coll		(1906)	81 1
Trinity Med. Coll., Toronto		(1904)	84.2
FAILED			
American Coll of Med. and Surg		(1905)	68 4
Medical Coll of Indiana		(1905)	67 2†
Barnes Med Coll.		(1905)	69†
Bennett Coll of Ecl Med and Surg		(1906)	72.8

LICENSED THROUGH RECIPROCITY

College.		Year Grad	Reciprocity with
Rush Med. Coll.		(1903)	Iowa
College of P and S Chicago	(1901) (1904),	(1906)	Iowa
University of Iowa	(1904) (2	1906)	Iowa
Drake University	(1905) (2	1906)	Iowa
Sioux City Coll of Med.	(2	1906)	Iowa
Keokuk Med. Coll Coll of P and S		(1906)	Iowa
Tufts Coll. Med School		(1898)	Iowa
University of Minnesota	(1904) Iowa (1905)	(1906)	Minnesota
Ensworth Med Coll		(1904)	Iowa
Creighton Med Coll		(1906)	Iowa
Cleveland Univ of Med and Surg		(1897)	Minnesota
Jefferson Med Coll		(1906)	Iowa
Trinity University Toronto		(1896)	Minnesota

* Examined July 1906 and licensed Jan 10 1907
† Second examination

District of Columbia January Report —Dr George C Ober secretary of the Board of Supervisors in Medicine, reports the written examination held at Washington, Jan 11 14, 1907 The number of subjects examined in was 17, percentage required to pass, 75 The total number of candidates examined was 11, of whom 6 passed and 5 failed The following colleges were represented

College		Year Grad.	Per Cent.
PASSED			
George Washington Univ	(1899) 89 6 (1906)	76 1 78 4	8[illegible] 8
Howard University		(1906)	81 4
Georgetown University		(1903)	81 [illegible]
FAILED			
Georgetown University		(1905)	68 2
George Washington University	(1905) 69 6	(1906)	70 1
Baltimore Med. Coll		(1904)	71 5
University of Virginia		(1906)	71 5

Arizona January Report.—Dr Ancil Martin, secretary of the Board of Medical Examiners of Arizona, reports the written examination held at Phœnix, Jan 7 8, 1907 The number of subjects examined in was 9, total number of questions asked, 90, percentage required to pass, 75 The total number of candidates examined was 10, of whom 9 passed and 1 failed The following colleges were represented

College.		Year Grad.	Per Cent
PASSED			
Keokuk Med. Coll, Coll. of P and S	(1901) 83 4	(1906)	85 7
Rush Med. Coll		(1904) 85 3	91
St. Louis University		(1904)	80
Long Island Coll Hosp		(1905)	85
College of P and S New York		(1901)	84
Cincinnati Coll of Med and Surg		(1880)	90
Jefferson Med. Coll.		(1905)	85 5
FAILED			
Barnes Med. Coll St. Louis		(1902)	30

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every day practice Contributions will be welcomed from our readers.]

OINTMENTS

By W A. Jolley, M.D

BOULDER, COLO

FATS AND OILS

The customary distinction between fat and oil is that one is a solid and the other is a liquid. They are abundant in Nature and easily obtained. Their use in medicine is accompanied by the usual fantasies which tradition favors old remedies There is a fascination which the names goose grease, skunk oil, rattlesnake oil, etc., convey that will not be displaced in the minds of the laity or the medical profession by hard scientific facts We find their principal use in salves which were applied on any and all occasions, the most obnoxious smelling and abhorrent mixtures being credited with the greatest healing powers

Antiseptic surgery did not cause a diminution in their use, but created a new field as vehicle for the multitudinous antiseptic agents Advance in the knowledge of organic chemistry has given us a better understanding of individual members of the fats, but has caused confusion by adding so many new ones to the already large list

MINERAL FATS

The elegant mineral fats now on the market have nearly supplanted the vegetable and animal fats which were our main reliance, this should not be the case, for each has its use Crude petroleum is a complex mixture, which gives a series of products, rhigolene, gasoline, benzine, kerosene, and a solid residuum from which we get vaselin (petrolatum), paraffin lubricating oils, and many other substances

The Pharmacopeia gives Petrolatum Liquidum, Petrolatum Album, Petrolatum and Paraffin The only practical difference is their melting points Ointments of any degree of solidity can be made by combining the proper amounts of each Enterprising manufacturing chemists have improved on these U S P standards and furnished splendid preparations of the mineral oils from the liquid ones to be used in atomizers to the hard waxes, giving each a trade name

The mineral fats are not subject to any chemical reaction at the temperature ointments are used they are not oxidized do not form irritating salts nor break up into other compounds, and should be used as vehicles for active principles to produce local antiseptic anesthetic irritative and protective action They are not absorbed by the body and should not be used when systemic effect is desired through external applications

The fact that they are not subject to chemical change renders them specially adapted to all cosmetic purposes for the animal and vegetable fats will often become rancid and offensive to the sense of smell and irritating to the surface to which they are applied Cold Cream (Unguentum Aquæ Rosæ) is an elegant pharmaceutical mixture and should be used more than it

is, but it will occasionally become rancid A similar appearing mixture which will not deteriorate with age can be made by substituting Petrolatum Liquidum for almond oil The presence of borax in cold cream causes it to become discolored when certain chemicals are added to it This would not happen with mineral fats, for no antiseptic is needed to keep them from becoming rancid If Unguentum Aquæ Rosæ is prescribed the ointment should be made as given in the U S P, unless there is an understanding between the druggist and physician.

VEGETABLE AND ANIMAL FATS

Most of the vegetable and animal fats belong to the chemical class known as the fatty acids Those of practical use are palmitic, stearic and oleic acids. They do not exist as acids in Nature, but as glycerids, that is in chemical combination with glycerin. They are not found separate, but always together in varying proportions, in vegetable fats, oleic acid predominates, causing them to be liquids, in animal fats, the excess of either stearic or palmitic acid causes them to be solid

Some slight chemical reaction in the growing plant causes a small portion of the fat to assume a certain definite composition, which gives each oil a distinctive feature For example, linseed oil is characterized by linoleic acid, an oxidation product of oleic acid, castor oil by ricinoleic acid, etc. These various oils and fats also contain bodies which give each a distinctive odor, while they may be nearly alike chemically They form salts with alkalies, which we call soaps, sodium salts are generally solid, and potash salts or soaps are soft

The higher members of this class, the ones we are discussing, are insoluble, but readily break down into lower members of the same class, which are soluble butyric acid and others, which fact enables us to separate the two by washing with water

Fats exist in Nature in the form of minute globules invested by a proteid membrane, in large masses in the animal and in certain tissues in the vegetable The animal tissues are cut into fragments, to facilitate the release of the fat from its investing sheath, are liquefied by the application of heat, and removed by straining and pressure. In removing the vegetable oils pressure alone is used to remove a part of the oil, the highest grade, heat is then applied, followed by pressure, which produces an oil of lower grade If the membrane is not entirely removed it decomposes readily and causes the fat to become rancid This is shown by the rapid decomposition of butter when the casein has not been entirely removed. This decomposition is a chemical change resulting in the formation of other compounds offensive in odor and irritating to the skin or mucous membrane It is also facilitated by many organic drugs, so we often find salves which are intended to be bland applications turn into very irritating applications It is stated that the organic preparations which liberate oxygen should always be combined with the mineral fats for this reason. The common oils and fats are Linseed, olive, almond and cottonseed oils, suet, tallow, lard and others which are likewise suitable for pharmaceutical use, but commercially impracticable

Linseed Oil—Linseed Oil (Oleum Lini) is a mixture of from 10 to 15 per cent of palmitin and stearin, and from 85 to 90 per cent of the glycerids of oleic and linoleic acids The last mentioned acid is an oxidation product of oleic acid and gives this oil its distinctive features It is called a drying oil for the oxidation, having begun, continues rapidly when exposed to air, and forms a hard resinous mass, if in bulk, or a hard film when spread over a surface This is the reason for its use in painting If the oil be finely subdivided, as on old rags, the oxidation takes place so rapidly that it bursts into flames. This is the cause of so many fires of spontaneous combustion, and should be considered when large quantities of Carron Oil (Linimentum Calcis) are applied on gauze to burns The process of drying or hardening is facilitated by boiling the oil with oxidizing substances, such as lead acetate, red lead, litharge manganese dioxid, manganese borate and others Boiled oil is then very different from the raw oil, yet few druggists know the distinctive features of the two

Other oils which belong to this class are candlenut oil, corn oil, grapeseed oil, hempseed oil, nigerseed oil, pumpkinseed oil, sunflower oil, walnut oil and wood oil These oils are not suitable for use in ointments, except when a hard base is required, or for immediate use

Olive Oil and Almond Oil—Olive Oil (Oleum Olivæ) and Almond Oil (Oleum Amygdalæ Expressum) have no distinctive features and are good examples of the so called primary fats, as each contains about 70 per cent of oleic acid, as olein, with 30 per cent of palmitin and stearin They are used principally for these fats, the purity of which depends on the condition of the fruit and care in extracting the oil Being free from extraneous matters these oils are admirably suited for use in ointments and soap making The U S P Sapo (common Castile Soap) is made from olive oil and sodium hydrate The mottled appearance of the old soaps was due to the minute quantity of iron in the water used in making the soap The U S P Sapo Mollis (soft soap), made from linseed oil, shows the difference in the oils The fact that one is hard and the other is soft is due to the alkali used, as has been stated

Cottonseed Oil—Cottonseed oil does not differ much from the preceding oils after it has been purified, in fact much of the "olive oil" sold is cottonseed oil. Cottonseed oil contains a large amount of palmitin and stearin and forms the basis for the commercial articles known as cottolene and lard compounds

Lard—Lard (Adeps) is the name applied in commerce to almost any mixture of grease, and it seems that most of the pharmacists have the same idea, and are unaware that there is a standard established for this article, for the substance they dispense resembles that sold by the grocer and marketman Lard should be a mixture of stearin, palmitin and olein and not these fats in different stages of decomposition The U S P requires that only the abdominal fat of the hog be used in making lard, while commercially any fat is used. Adeps Benzoinatus is intended to remedy the difficulty by adding an antiseptic to prevent decomposition and perfume the lard, but it is not as good as pure lard, for it often covers a slight amount of rancidity

Suet—Suet (Sevum Preparatum) does not differ much from lard chemically except in the odorous principles It is made from the abdominal fat of the sheep

Tallow—Tallow is not recognized in the U S P, but is used in the lard compounds with cottonseed oil. It is obtained from the internal fat of the beef

These oils and fats are not firm enough to form ointments, so beeswax (Cera alba and flava) and spermaceti (Cetaceum), are added in sufficient amounts to bring them to the required consistency Their chemical nature is similar so the only effect produced is in raising the melting points of the mixtures. We use these animal and vegetable fats as vehicles to carry active principles which we wish to apply to the surface of the body for the purpose of producing systemic effect The mineral fats are used only when local action is desired The resulting compound is called an ointment or a cerate, according to its consistency Ointments are soft, cerates are firmer

The U S P gives a formula for an ointment (Unguentum) as follows

Ceræ flavæ	ʒv	20
Adipis benzoinati	℥xx	80

The German Pharmacopeia gives a different mixture, which will help illustrate the fact that we can obtain the same degree of consistence by different methods

Ceræ flavæ	ʒi	30
Olei olivæ	℥xviiss	70

We should remember then that the word Unguentum has a definite meaning and indication It should not be written Unguentum Simplex, for the last word is superfluous

(This subject is to be continued)

Iodin in Granular Pharyngitis

In cases of middle ear catarrh associated with granular pharyngitis, W L Ballenger, Chicago, employs the following formulas

℞ Tincturæ iodi	m xlviii	ʒ5
Glycerini q s ad	f℥i	30

M. Sig Apply to pharynx with swab once daily

℞ Iodoformi	gr i		06
Potassii iodidi	gr x xx		6 1.3
Morphinæ sulphatis	gr i		06
Glycerini	f℥i	30	

M. Sig Apply to pharynx with swab once daily

℞ Tincturæ iodi	gr v xx		3 1.3
Potassii iodidi	gr x xxx		6 2
Olei gaultheriæ	m v		3
Glycerini	f℥i	30	

M. Sig Apply to pharynx with swab once daily

℞ Tincturæ iodi			
Tincturæ ferri chlor			
Glycerini, āā, q s	f℥i	30	

M. Sig Apply to pharynx with swab once daily

Medicolegal

Cause of Death After a Fall.

The St Louis Court of Appeals says that in the case of Johnson vs Continental Casualty Company, the insured, a motorman, met with a fall in his home and the injuries then received were said to have caused his death two weeks later According to witnesses who saw the accident, he had gone from one room of his home to the other to get a drink, and, as he went back, fell against a dresser having a marble top and from thence to the floor The court holds that if either traumatic pneumonia or cerebral hemorrhage ensued as the result of the fall, and the insured died in consequence of the disease, his death was caused proximately and solely by accidental violence within the meaning of the policy It says a physician testified that the patient must have died from one of those causes, but which one could not be known without knowing the patient's temperature at intervals, his other symptoms preceding death, and whether he had any prior diseases, that, if he was in good health before the accident, in the opinion of the witness, he must have died of one of said ailments The value of the physician's testimony was to be determined by the jury The court found nothing which appeared to it to be incredible in what he swore to No doubt it was possible for the insured to have died of some ailment unconnected with the accident and which he was afflicted with prior to the accident or contracted subsequently, but whether he did or not was, on the evidence adduced, a fact to be found by the jury Demonstrative proof that he died solely in consequence of the accident, hardly could be made On such issues evidence can not go beyond producing that degree of conviction in reasonable minds on which men are accustomed to decide and act in ordinary affairs All possibility of mistake can not be excluded

Non Experts May Testify to Symptoms But Not to Diseases.

The Court of Appeals of Kentucky holds, in Illinois Life Insurance Company vs De Lang, that no witness, not an expert, should be allowed to state his opinion that the insured had consumption or did not have it, or that he was in good health or bad health The non expert witnesses may detail the facts that they know They may tell what symptoms they saw or observed, but the jury can judge as intelligently as the witnesses as to what the symptoms indicated The court also holds that the insured's wife was a competent witness for the plaintiff She might testify as any other witness as to the health of her husband, or as to what he did or as to any other matters not involving communications between her and her husband growing out of the marital relation The court sees no objection to the testimony which she gave in the case to the effect that her husband did not have this or that symptom at a certain time

Exhibition of Amputated Leg to Jury

The Court of Appeals of Kentucky says in Ford vs Providence Coal Company, that it was assigned as error that the trial judge refused to permit the plaintiff to exhibit his injured leg to the jury, but as the leg had been amputated this ruling was not prejudicial However in the trial of personal injury cases the court goes on to say it is competent for the plaintiff to exhibit the injured member to the jury, and this he may do on the request of his counsel or of the adverse party—provided that the exhibition does not violate any rule of propriety or decency Whether it does so or not is, of course, a question that must be left largely in the discretion of the trial judge No objection of this kind could be urged in this case, as the exhibition of a man's leg that has been amputated could not be considered at all improper Evidence of this character is really the best evidence obtainable of the extent and character of the injury that the person seeking damages has sustained, and the jury has the right to be aided in making up their verdict by a personal view of the injured member

Expense of Protecting Public from Insane Pauper

The Supreme Judicial Court of Maine holds, in the case of Inhabitants of Town of Casco vs Inhabitants of Town of Limington, that the expenses incurred by a town to protect its inhabitants or the public from danger of injury by insane paupers are not recoverable under the pauper statute, nor under the contagious diseases statute, which authorizes the recovery only of the expenses of relieving persons destitute, and of their removal or burial The statute authorizing recovery of expenses of preventing the spread of contagious diseases by paupers is not applicable to a case of insanity

Homicide by Abortionist—"Private Papers"—Evidence

The Supreme Court of Illinois says in Clark vs People, that Section 3 Division 1 of the Criminal Code of Illinois reads "Whoever, causes any woman, pregnant with child, to abort or miscarry, or attempts to procure or produce an abortion or miscarriage, unless the same were done as necessary for the preservation of the mother's life, shall be imprisoned , or if the death of the mother results therefrom, the person procuring or causing the abortion or miscarriage shall be guilty of murder" It was insisted that this statute does not provide that if the death of the mother results therefrom, the person attempting the abortion or miscarriage shall be guilty of murder, but only in case a person actually causes the abortion But the court believes the fair and reasonable construction to be that when death results either from an abortion or an attempt to produce an abortion the person responsible should be held guilty of murder

Furthermore the court is also of the opinion that under the last part of Section 145 of the Criminal Code, which reads, "where such involuntary killing shall happen in the commission of an unlawful act, which in its consequences naturally tends to destroy the life of a human being, or is committed in the prosecution of a felonious intent, the offense shall be deemed and adjudged to be murder," the accused under the indictment in this case could be held for murder

Some of the counts of the indictment charged the instrument to have been thrust into the "body and womb" and other counts into the "private parts and womb" and it was insisted that there was fatal variance in that the proof showed that the instrument was not thrust into the womb but into the bladder But the court thinks that, apart from technical distinctions the term "private parts' sufficiently describes the female organ of gestation and its immediate vicinity not only for that particular and limited portion anatomically known as the womb but for the vagina the urethra and lips of the womb It says that the fact that the instrument inserted through the lips of the private parts entered the urethra and pierced the bladder instead of passing up the vagina and into the womb did not in any way mislead the accused

The court also says that evidence to convict of a crime such as here charged in the absence of the testimony of the victim is almost always circumstantial and hence the question of the admissibility of collateral facts in evidence is often to be determined by the nature of each case And it holds that on a trial for an offense such as charged in this indictment intent is an essential ingredient and it is competent to hear the declarations of one on trial for [illegible] to the effect that she was in the ha[illegible] solicited such work

Liability for Communication of Smallpox by Agent

The Court of Civil Appeals of Texas affirms, in Missouri, Kansas & Texas Railway Company of Texas vs Raney, a judgment for $150 in favor of the latter party, who brought the action to recover damages for the company's ticket agent communicating smallpox to him and his wife It holds that the company, under the common law, owed to the individuals composing the public who dealt with it the duty to keep them from having contagious diseases communicated to them by its agent while they were dealing with it through such agent

The testimony of a physician to the effect that, according to his best recollection, he had seen and examined the agent, and that he then had smallpox, and that he so told him, the court holds was sufficient to support a finding of the jury that the agent had smallpox and knew it when the plaintiff bought tickets of him for himself and wife It also holds that the testimony was sufficient to support the finding of the jury that the plaintiff contracted the smallpox from the company's agent, when, in so far as the evidence showed, such agent was the only person to whom the plaintiff was exposed who had the disease, and the evidence showed that the plaintiff contracted it within the usual time after such exposure

The company's contentio that knowledge on the part of its ticket agent that he had smallpox at the time he sold the tickets to the plaintiff would not constitute knowledge on its part of such fact, the court does not think sound In its opinion, the agent at the time the plaintiff was exposed to him, being the ticket agent of the company and in the discharge of the duties incumbent on him as such agent, and the plaintiff being present for the purpose of transacting business with him in the line of his duties to the company, and the agent at the time having the contagious disease of smallpox, and knowing that he had it, his knowledge became that of his principal, the railroad company

Furthermore, the court holds that the act of the company's agent in communicating to the plaintiff smallpox was e proximate cause of the plaintiff's wife contracting the sease, and his being quarantined on account of his wife's having smallpox It says that the company, through its agent, knew from the attending circumstances that the tickets sold were for the plaintiff and his wife, and of that relationship between them, and that, in their companionship and association with each other during the trip on the cars and while visiting in Alabama, they would not only be in close proximity with each other, but frequently in personal contact with each other, so that if the husband contracted the disease of smallpox from the agent of the company, it was natural and probable that he would communicate it to his wife, and such a result was one that might reasonably have been anticipated by the company through its agent

Therefore, the company, having notice through its agent, at and prior to the time the plaintiff was exposed to him, that he had the smallpox, and said agent having communicated said disease to the plaintiff and his wife, the court holds that the company was liable to the plaintiff for the damages sustained by him as the direct and proximate results of such wrongful act of its agent Nor does it think the losses sustained by the plaintiff in his business on account of patrons being kept away through fear of contracting the disease were too remote to be recovered

Presumptions and Proof Requirements as to Suicide

The Supreme Court of Minnesota holds, in the case of Lindahl vs Supreme Court Independent Order of Foresters, an action to recover the amount of a benefit certificate that the defense being suicide, (a) The burden of proving that the deceased committed suicide was on the defendant (b) The presumption is against suicide (c) If the known facts are consistent with the theory of natural or accidental death the presumption which the law raises from the ordinary motives and principles of human conduct requires a finding against suicide (d) When circumstantial evidence is relied on the defendant must establish facts which exclude any reasonable hypothesis of natural or accidental death

The court says that it is settled that on the issue of suicide the burden is on the defendant, who asserts the fact, to prove the same by a fair preponderance of the evidence. In all legal discussion the existence of certain qualities in human nature are presumed Common experience teaches that the love of life, the instinct of self preservation, respect for the laws of the land, and the principles and teachings of religion are ordinarily sufficient to prevent a person from destroying his own life, and therefore, when the facts proved with reference to death admit equally of the inference that the death resulted from accident or suicide, the presumption is that death was accidental.

As long as the evidence is consistent with the theory of accidental death, the presumption against suicide is controlling The issue being the fact of suicide, it is for the defendant to prove this ultimate fact by a fair preponderance of the evidence It starts with the burden of overthrowing the presumption that a person does not voluntarily destroy what is commonly regarded as the most precious of all possessions, life itself When the fact of death appears, the law presumes that it must have resulted from causes which were not voluntarily brought about by the deceased Death may result from innumerable causes The facts of a case may suggest accidental shooting, poisoning or drowning If the evidence is consistent with the theory of either, the presumption which the law raises from known and recognized controlling forces of human nature requires the conclusion that the death was accidental If the known facts are consistent with a cause of death which does not involve self destruction, that cause must be accepted

After all the hypotheses which are consistent with an innocent or accidental death are eliminated, the conclusion of suicide may then be drawn The burden is on the defendant to show that the circumstances and conditions are inconsistent with any other reasonable cause of death than that of suicide, that is, it must eliminate and disprove all other causes of death which are consistent with the evidence before the jury is justified in inferring that the deceased committed suicide The ultimate fact of suicide is thus shown by the proof of certain evidentiary facts which are inconsistent with the theory of accident or natural death, or by proof of the non existence of facts which would justify the inference of accident But the ultimate fact is required to be proven by a preponderance of evidence only, and this rule is in no way affected by the subsidiary requirement that the defendant must by its evidence exclude every other reasonable theory for accounting for the death

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York

March 30

1 *New Method of Operation for Epispadias C Beck New York.
2 *Pneumonia with Special Reference to the Use of Fresh Air and Saline Solution S S Burt, New York
3 Localization in Multiple Intestinal Obstruction G A Friedman New York.
4 *Buttermilk as an Infant Food A Strauch Chicago
5 *Relationship of Clinical Symptoms to Microscopic Findings in Carcinoma of the Uterus C. O Thienhaus Milwaukee.
6 Illustrations for Medical Journals. A J Martin New York.

1 New Operation for Epispadias—Beck describes an operation for epispadias which he employed successfully in one case The funnel like appearance of the urethral orifice over the pubic bone suggested to Beck to dissect the surrounding walls, including the whole urethral gutter, in the same way that a hernial sac including the cord is liberated and mobilized in the radical operation for inguinal hernia. This plan was carried out by making a continuous incision around the funnel as well as the outer margins of the urethral gutter the aim being then to shell out a coherent canal which is meant to be the new urethra The steps of the operation are described in full

2 **Pneumonia**—The best course to pursue in the treatment of pneumonia, according to Burt, is to secure for the patient repose of mind and body, a simple, but nutritious diet, an unlimited supply of fresh air and sunshine, and such hygienic measures as are necessary to maintain the strength of the patient and to alleviate the severity of symptoms and avert complications as far as possible He advises promoting the intrinsic capacity of the fluids and cellular elements of the body to overcome the virulence of the infection, and suggests that this may be done by the injection of physiologic saline solution. Care should be observed not to inject more than one dram of the solution to each pound of the body weight, in each quarter of an hour

4 **Buttermilk as Infant Food.**—Strauch has had excellent results accrue from the use of buttermilk in the feeding of infants His experience includes more than 20 cases, mostly of malnutrition, resulting from chronic gastrointestinal disturbances, with occasional acute exacerbations up to the intensity of cholera infantum, one case of habitual vomiting (pyloro spasm), one case of icterus catarrhalis, one prematurely born child, and some cases of *alaitement mixte* Some of these cases had not responded to other methods of feeding and treatment

5 **Carcinoma of Uterus**—Thienhaus urges careful and conscientious efforts on the part of the general practitioner to diagnose carcinoma of the uterus, resorting to the microscope in dubious cases He sounds a note of warning against the indiscriminate cauterization of what appear to be simple erosions of the cervix without first confirming the diagnosis with the microscope.

Boston Medical and Surgical Journal.

March 28.

7 *Crusade Against Tuberculosis in Germany E A. Locke Boston.
8 *Diffuse Peritonitis Following Peritonitis in Young Children H B Smith, Boston.
9 *Extraordinary Blood Findings F Van Nuys Massachusetts.
10 *Cervical Adenitis with Reference to Mouth Infection F D Donoghue Boston
11 *Primary Ligation of Vas Deferens. G Walker Baltimore.
12 Studies in Psychopathology B Sidis Brookline
13 *Cancer of Vulva F W Johnson Boston.
14 *Method of Treating Appendicular Stump C F Denny St. Paul Minn
15 The Opsonins in Surgery J G Mumford Boston.

7 **Crusade Against Tuberculosis in Germany**—Locke discusses very fully the principles underlying the crusade against tuberculosis now being carried out in Germany He says that several fundamental considerations, which make such a general movement possible, should be borne in mind First the entire kingdom of Germany is under uniform laws, those pertaining to disease and the general health of the people being controlled by a national board of health presided over by a cabinet minister Through this imperial health bureau a most exhaustive investigation of the existing conditions has been carried out and relief measures promulgated, second, the scientific spirit which permeates German medicine is largely responsible for the effectiveness of this organization in that it has, step by step, pointed the way to success, third, on compulsory insurance against sickness and invalidity has placed at the disposal of the authorities immense funds which could in part be directly applied to the erection and maintenance of sanatoria, convalescent homes, care of the consumptive's family, etc.

8 **Diffuse Peritonitis Following Appendicitis in Children.**—Smith reports seven cases of diffuse peritonitis, following appendicitis, occurring in children, from 3 to 8 years of age, a study of which convinces him that appendicitis in children exhibits certain features not altogether common in adults Four of these children died The most striking feature in all of these seven cases was the fact that the pathologic conditions found at operation were out of all proportion to the duration of the illness In three of the cases, the peritonitis was so extensive as apparently to involve the entire greater cavity with an average duration of less than 48 hours from the appearance of the initial symptoms It was a noticeable fact that in five of the cases the perforation in the appendix was large, that is, as great in diameter as a split pea

9 **Extraordinary Blood Findings**—The characteristic feature of the blood in the case reported by Van Nuys was the presence of large basophilic phagocytic cells capable of ameboid motion There were two varieties of these cells One was a large, mononuclear cell, with granular, fragile, often vacuolated cytoplasm, the nucleus being large, oval or bean shaped, often vesicular, and sometimes containing a pale, yellow brown nucleolus The other type was a multinuclear, phagocytic, giant cell, with long fantastic streamers of protoplasm The patient had suffered from dyspnea, severe constipation, chronic bronchitis and some edema of the feet and bases of the lungs He had a fairly compensated aortic regurgitation, his liver and spleen were enlarged considerably In the region of the descending colon were two hard masses, egg shaped, deep and immobile On the day of his admission to the hospital the patient a Russian Jew, butcher by occupation, passed nineteen feet of the beef tapeworm after one dose of castor oil Eggs of *Trichocephalus dispar* were also present in the stools

10 **Cervical Adenitis.**—A careful study of 300 cases of cervical adenitis leads Donoghue to draw the following conclusions 1 Enlarged glands of the neck are not, primarily, tuberculous, and bear the slightest relation, if any, to general or pulmonary tuberculosis 2 They are due to a mixed infection of pus producing bacilli 3 They will quickly resolve if the source of the infection is removed before the glandular tissue becomes disorganized. 4 If disorganization takes place, the gland should be poulticed until the gland is practically liquefied It should then be opened by a stab puncture emptied and drained by a "Briggs canula" 5 Cases seen late, with a large mass of partially calcified and partially disorganized glands present, call for a thorough and extensive dissection

12 **Primary Ligation of Vas Deferens Before Operations on Testes**—An exhaustive study of tuberculosis of the genito urinary organs has convinced Walker that during the excision of a testicle the manipulation necessitated is more than likely to force tubercle bacilli along the healthy vas into the blood or lymph vessels and thus produce a general infection In order to eliminate this danger Walker advises preliminary ligation of the vas deferens and its accompanying vessels high in the groin After the testis has been freed in the usual way the vessels should be cut at the point of primary ligation and the cord freed still higher up and gently pulled as far as practicable out of the external ring before it is ligated and cut

13 **Cancer of Vulva.**—Johnson reports a case of primary epidermoid carcinoma of the labium and vulva, occurring in a woman 69 years of age The labium, clitoris and three fourths of an inch of the urethra were removed For five years the patient remained well Then the tumor appeared on the opposite labium and it was removed two years later seven years after the original operation Nine months after the second operation the patient reported herself in good health

14 **New Method of Treating Appendicular Stump**—In the method described by Denny the appendix was freed the meso appendix ligated and a purse string suture applied in the cecum in such a way that two loops are left which with the two ends at the starting point, divide the circle about the appendix into three equal spaces A smooth jawed Ferguson clamp is applied to the appendix, and distal to this clamp the appendix is severed with a thermo-cautery The stump is inverted and invaginated into the cecum and the ends of the ligature previously applied are pulled until the loops disappear

New York Medical Journal.

March 30

16 *Hodgkin's Disease a Type of Sarcoma W B Coley New York.
17 *The Cataphoric Table C B Massey Philadelphia
18 *What State in Development of Cataract Particularly Senile Cataract, is the Most Suitable for Its Removal by Extraction J E. Weeks New York
19 *Pubiotomy R. C. Norris Philadelphia
20 Endemic Neuritis J M Wheate Boise Idaho
21 *Eosinophilia and Trichiniasis P Ottenberg New York
22 Possible Significance of New Pyloric and Duodenal Lesions in Guinea-pigs Inoculated Subcutaneously with Diphtheria Toxin W D Cannon, Washington
23 Modern Medicine in China W H Washington

16 —See abstract in THE JOURNAL, Jan 12, 1907, page 161

17 **Cataphoric Table.**—Massey describes a cataphoric table which he has devised, and which permits of a perfect control of the 110 volt direct street current in the operating room

18 **Cataract**—Weeks divides cataracts into four varieties 1, Cataracts that form early in life, 2, cataracts which develop by the formation of fissures in the cortex, 3, cataracts in which the opacification appears in the center of the lens, and 4, zonular cataract Extraction of the cataract in the four types mentioned, if done when most propitious for the welfare of the patient, would be performed by Weeks in the first type as soon as liquor Morgagni appeared between the lens capsule and the lens substance, in the second type, at the convenience of the patient after vision is reduced below that necessary for the ordinary vocations of life, in the third type, when useful vision has been abolished, and the lens is appreciably shrunken, in the fourth type, at the convenience of the patient after vision is reduced below that necessary for ordinary uses

19 **Pubiotomy**—Norris reports a case in which pubiotomy was done instead of an elective Cesarean section, with excellent results Both mother and child lived Norris says that it seems to him that in the hands of the average surgeon in private practice pubiotomy is safer than Cesarean section

21 **Eosinophilia and Trichiniasis**—Ottenberg publishes the histories of eight cases of trichiniasis Although the presence of trichinæ was demonstrated in only three of the cases, the clinical evidence was sufficiently striking to permit of making a positive diagnosis The combination of eosinophilia with the other characteristic symptoms, viz, edema of the face, which occurred in six of the eight cases, muscular pains, present in all, though only very pronounced in two, and fever, present in seven cases, makes a clinical picture which could hardly be presented by any disease other than trichiniasis

St. Louis Medical Review

December 22 29 and January 5 12

24 Vaccination A Critical Examination E Hubbard East Aurora N Y

March 23

25 Present Scope of Stomach Surgery W Bartlett St Louis
26 Medical Education in German Universities Other than Berlin W C Gayler St Louis.
27 Medical Education in Vienna. L. Rassieur St. Louis

Lancet-Clinic, Cincinnati.

March 30

28 Organization of the Academy of Medicine of Cincinnati B Stanton Cincinnati
29 Reminiscences of the Academy of Medicine A. G Drury Cincinnati
30 Sense of Probability in Diagnosis of Disease B Holmes Chicago
31 Rhinitis. E S McKee Cincinnati.

Military Surgeon, Carlisle, Pa.

March

32 Tendon Tissue versus Catgut. N Senn Chicago
33 Laboratory Work Aboard Ship A. W Balch, U S N
34 *Penetrating Wounds of Abdomen R R. Wreden Russia.
35 *Case of Multiple Gunshot Wounds L T LeWald U S A.
36 *Case of Fracture of the Skull S M Waterhouse U S A.
37 First Aid Splint Packet. F Spear, U S N
38 Natural vs Mechanical Ventilation of Hospitals P H Ballache, U S Public Health and Marine-Hospital Service

34 **Penetrating Wounds of Abdomen**—Wreden says that active operative intervention when admitted by the general condition of the wounded, and the surrounding circumstances, is indicated in all cases of perforating wounds of the abdominal cavity, with the exception of wounds inflicted with the modern small caliber undeformed rifle bullet In these cases expectant treatment gives the best results He emphasizes that all those wounded in the abdomen need full rest, at least for one week after the infliction of the wound He has found morphin a powerful remedy in facilitating the cure of penetrating wounds of the abdomen

35 **Multiple Gunshot Wounds**—LeWald reports the case of a Filipino who was shot four times, at close range, with a regulation Colt's revolver caliber 38 and was finally stunned by a blow on the forehead by the end of a carbine The first bullet entered the chest near the right nipple, passed upward, backward and outward, perforated the lung, and made its exit through the back, passing through the outer edge of the right scapula The second bullet entered the chest near the left nipple, perforated the lung and lodged in the back of the subcutaneous tissues The third bullet entered the chest near the left shoulder, passed downward and backward, perforated the left lung and lodged in the muscles of the back The fourth bullet entered the palm of the left hand, passed through the subcutaneous tissues, and made its exit through wound in the anterior surface forearm The patient was discharged cured at the expiration of 28 days

36 **Fracture of Skull.**—In the case reported by Waterhouse a very extensive lesion resulted from a comparatively slight traumatism A man fell down a basement stairs and struck on the concrete floor Apparently he was intoxicated at the time He was picked up unconscious, and at the time there was rather free hemorrhage from the left ear The man died about three and a quarter hours after receiving the injury A necropsy was made Large clots of blood were found at both sides of the head, both between the dura and the skull and betwen the dura and the brain Both cerebral lobes showed punctate hemorrhages The anterior tips of the frontal lobes were infiltrated with blood Starting at the region of the occipital protuberance was a V shaped fracture of some size, and there was also a transverse, jagged fracture across the orbital plate of the frontal bone on both sides and a transverse fracture across the ethmoid bone

Journal of the Kansas Medical Society, Lawrence

March

39 *Mycosis Fungoides. R E McVey Topeka
40 *Appendicitis L. Murdock Sabetha.
41 Electrotherapeutics. U G Iles Seneca
42 Ambulatory Treatment of Fractures of Lower Limbs L. W Shannon Hiawatha
43 Major Complications and Treatment of Pneumonia. D. N Martin Benedict.

39 **Mycosis Fungoides**—McVey reports a case of this kind occurring in an infant The tumors were situated on the left eye and left cheek On other portions of the body there were circumscribed erythematous patches The father of the child had had such an eruption over his body when he was an infant, but after his development into manhood the disease disappeared and did not return The child was given the syrup of the iodid of iron, 5 drops, three times a day, and the oleate of bismuth was applied locally The Finsen light was also used for 15 minutes each day The child died three months after coming under observation

40 **Appendicitis.**—Murdock reports five cases of appendicitis to illustrate that often the only symptoms manifested are the initial pain in the abdomen, elevation of temperature, and increased pulse rate, that is, there is almost a total lack of grave symptoms to justify a laparotomy

Denver Medical Times and Utah Medical Journal

March

44 *Case of Sarcoma. I B Perkins Denver
45 Appendicitis in Country Practice A. R Pollack Ely Nevada.
46 *Skin Grafting—Choice of Method G F Roehrig Denver
47 Case of Raynaud's Disease O M. Shere Denver
48 Open Air Treatment in Skin Grafting H G Wetherill Denver
49 *Excision of a Gasserian Ganglion with Use of a Wooden Plug for Control of Hemorrhage A H Williams Denver
50 *Treatment of Chronic Rheumatism E Stuver Fort Collins
51 *Therapy of Rheumatism W H Heisen Denver
52 Laboratory Diagnosis for the Practitioner J C Todd Denver
53 Examination of the Infant F H Raley Salt Lake City
54 Dislocation of Outer Extremity of Clavicle Treated by Elastic Webbing. E W Whitney Salt Lake City
55 *Chorea, an Interesting Case. J U Giesy Salt Lake City
56 *Gummatous Meningitis W B Ewing Salt Lake City

44 **Sarcoma.**—Perkins reports a case of small round celled sarcoma occurring in a woman aged 37, in which a portion of the ileum the entire cecum and ascending colon, and a portion of the transverse colon were resected The diagnosis was confirmed on microscopic examination The patient recovered and has remained well for nine months

46 **Skin Grafting**—While Roehrig's conclusions based on his experience are wholly favorable to the employment of the Reverdin grafts he concedes that there is at least one instance in which the Thiersch flap method is of equal, if not of su

perior advantage because of improved facility of operation, and that is when a convenient amputation is taking place, either on the same or some other patient and the skin of the amputated limb can be employed advantageously However, the advantage gained is merely in time saved and not in additional effectiveness in results

49 **Excision of Gasserian Ganglion**—In separating the dura from the bone, Williams deliberately tore the middle meningeal artery as it emerged from the foramen spinosum The hemorrhage, which was profuse, was quickly and absolutely controlled by forcing into the opening a conical plug of wood, previously prepared by repeated sterilization for this particular purpose This freedom from hemorrhage greatly facilitated the approach and free exposure of the ganglion, which was eventually removed. The operation has given the patient absolute freedom from pain for over a year

50 **Treatment of Chronic Rheumatism.**—Stuver has found the galvanic current exceedingly beneficial in many cases of chronic rheumatism He employs a current of from 5 to 20 mp, applying it from 20 minutes to half an hour He says that these results can be increased if a thin layer of cotton wet in a solution of cocain be applied over the skin under the positive pole

51 **Id.**—Heisen considers massage most useful in the treatment of chronic rheumatism

55 **Chorea.**—Giesy reports a case of chorea that was complicated by marked and persistent tympanitis, a primary eruption, slight meningeal symptoms and endocarditis The case suggested from time to time mild scarlatina, parasitism, meningitis and chorea Giesy suggests that perhaps the choreic movements were caused by a toxemia resulting from improper intestinal metabolism

56 **Gummatous Meningitis**—Ewing reports a case of this kind occurring in a woman aged 39, twice married, who had four children living, all by the first husband After her second marriage she aborted many times About three months after the marriage a sore appeared on the external genitals, which was treated locally with good results Ten years afterward she manifested symptoms of meningeal disease, such as headache, sleep disturbances, muscular weakness, impaired memory and fleeting paresis, which led to the diagnosis of gummatous meningitis Under the most intensive antisyphilitic treatment the patient began to improve and continued to improve until she finally disappeared from observation

Journal of the Missouri State Medical Association, St. Louis
March

57 *Deep Rectal Abscesses J M Frankenburger Kansas City Mo
58 *Extrapulmonary Causes of Cough J C. Buckwalter, St. Louis
59 *Treatment of Chronic Joint Disease. M M. Edmonson Kansas City Mo
60 Neurasthenia Traumatic and Idiopathic Its Pathology and Prognosis D S Booth St. Louis
61 Pathology of Pelvic Inflammation T J Beattie Kansas City Mo
62 *Eartire as a Factor in Disease E H Musson Norborne
63 Causes and Prognosis of Valvular Lesions of the Heart. R G Davenport Trenton
64 The Joint Medical Council of St Louis and Municipal Hospital Reform J Green Jr

57 **Deep Rectal Abscesses**—Frankenburger reports two cases of this kind and emphasizes the fact that in obscure cases of trouble in the pelvic region the patient should be examined thoroughly and kept under closer observation until a positive diagnosis is made

58 **Cough.**—Buckwalter discusses the extrapulmonary causes of cough which develop in consequence of pathologic changes in the upper respiratory tract and disturbances in its function He reports several cases in point

59 **Treatment of Chronic Joint Disease**—Edmonson urges early diagnosis, suitable treatment for the individual case and maintenance of the general health of the patient by means of diet, tonics and hygiene

62. **Eartire.**—Musson suggests that there may be an analogous condition of fatigue of the auditory apparatus with important reflex manifestations similar to eyestrain He suggests for this condition the term eartire. Neurasthenia, headache and insomnia, he says, may be caused by maladjustment of the muscles or ossicles, or the long continued registration of unrhythmical sounds by even a normally adjusted ear may greatly fatigue the cerebral auditory centers and cause the manifestations of symptoms of eartire [Eartire was discussed editorially in THE JOURNAL, July 8, 1905, page 109]

Maryland Medical Journal, Baltimore

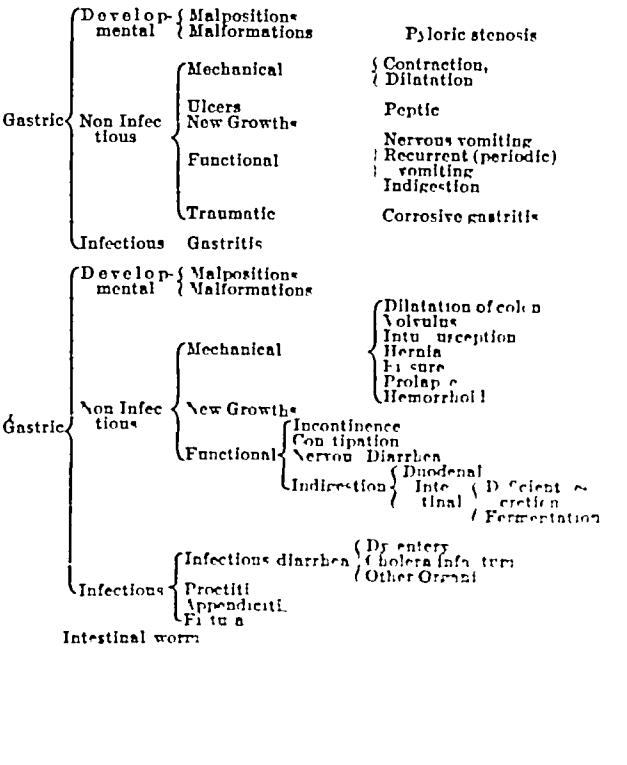
65 *Suggestions for Reorganization of Hospital Out Patient Departments. R C Cabot Boston.
66 Danger of Sending Consumptives to the Country E N LaMotte Baltimore

65 **Reorganization of Dispensary Service**—Cabot's paper is summarized as follows 1 Dispensary work is part of public health work, and should be done as well as are the examinations made at state and municipal laboratories 2 To attend to the mass of details on which good treatment depends a nucleus of permanent paid employés is necessary This paid staff should consist at present of nurses trained for the purpose 3 These paid employés should understand the physician's directions and see that they are carried out in the patient's home, reporting back to the physician any data concerning the domestic and social conditions which bear on the diagnosis and treatment of cases 4 Either through these nurses or through social workers on hand daily at the dispensary the hospital should obtain for its patients the full benefit of any resources—moral educational and financial—which the community affords This help is especially important in "functional" cases, which make up over one third of the medical outpatient clinics 5 Through these means and by the development of mechanical and psychical measures and hydrotherapeutics our dispensaries can be freed from the twin abuses which now limit their therapeutic usefulness (a) Hurry and consequent makeshift, (b) wholesale drugging

Bulletin of Johns Hopkins Hospital
March

67 *Necessity of a More Uniform Nomenclature of Diseases for Study and Teaching T M Rotch New Haven
68 *Acute Leukemia C P Emerson Baltimore
69 Benjamin Rush as Materialist and Realist L W Riley Baltimore
70 Multiple Tumors in Dog E K. Cullen Baltimore

67 **Uniform Nomenclature of Diseases.**—A new classification of diseases of the gastroenteric tract is suggested by Rotch The diseases are divided into gastric and enteric, and these again into developmental, non infectious and infectious The further subdivisions of the non infectious groups are based, as far as possible, on the origin of the condition, such as mechanical, functional, new growths, traumatism and ulcers The classification is presented in full as follows



68 **Acute Leukemia.**—Emerson reports three very interesting cases of acute leukemia 1 A case of acute lymphatic leukemia, without enlargement of lymph glands or spleen, with localized involvement of the bone marrow, and with very many white cells that were soluble in dilute acetic acid. 2 A case of acute leukemia, resembling a septicemia, with the leucocytes almost all achromatophilic 3 A case of acute leukemia with leucopenia—aplastic leukemia

Ohio State Medical Journal, Columbus

March 15

71 *Addison's Disease G F Zinninger Canton.
72 Necessity for Teaching Anatomy Physiology and Chemistry, as Applied to Medicine A. Ravogli, Cincinnati.
73 Psychotherapy H Cushing, Elyria
74 The Present Overshadowing Problem in Ophthalmology—The Muscle Question. F K. Smith Warren.
75 Ocular Gymnastics W B Van Note, Lima.
76 *Muscular Asthenopia and Treatment by Ocular Gymnastics H B Harris, Dayton.
77 Professional Cooperation. Rev F Poe
78 *Relation of Appendicitis to Pregnancy and the Puerperal Period. V N Marsh Flushing
79 Case of Traumatic Aneurism of Common Femoral Artery Treated by Temporary Occlusion of the Common Iliac and Suture of Rent in Femoral Artery J C Oliver, Cincinnati.
80 Colostomy Pad Which Fulfils Requirements Where Such a Device is Necessary F C Herrick Cincinnati
81 Simple Method for End to End Vessel Union F C. Herrick, Cincinnati

71 **Addison's Disease.**—Zinninger reports two cases of Addison's disease which terminated fatally One case met all the requirements of Addison's description, while the other at no time showed any pigmentation, although all the other symptoms of the disease were present Zinninger calls particular attention to the extreme myosis which was present in both cases

76 **Ocular Gymnastics**—Harris emphasizes the fact that although the extraocular muscles may be in a state of perfect balance they may be the cause of serious symptoms and be in great need of help by ocular gymnastics

78 **Pregnancy and Appendicitis.**—Marsh reports the case of a woman who, three months prior to the birth of her first child, suffered from a severe attack of appendicitis She recovered and was delivered of a healthy child at term She had a second confinement, two and a half years later, without trouble Fifteen days after her third confinement she manifested all the evidences of puerperal infection Irrigation failing to give relief, she was operated on The appendix, distended with pus, was found attached to the right horn of the uterus and overlying a large suppurating tube and ovary The apppendix and the right appendages were removed The patient recovered

Journal of Nervous and Mental Diseases, New York

February

82 *Herpetic Inflammations of the Geniculate Ganglion J R Hunt New York.
83 *Brain Tumor Symptom-Complex with Termination in Recovery H H Hoppe Cincinnati
84 *After-care and Prophylaxis and the Hospital Physician A Meyer New York.
85 *The Insane Commission of the St. Louis City Jail An Experiment in Civic Medicine S I Schwab St. Louis.
86 Consciousness in the Brutes G V N Dearborn Boston

March

87 *Migraine and Hemianopsia J J Thomas, Boston
88 *Peripheral Facial Diplegia and Palatal Involvement G W Jacoby New York.
89 Study of the Sensory Symptoms of a Case of Pott's Disease of Cervical Spine F R. Fry St. Louis
90 *Hemilingual Atrophy of Traumatic Origin S E Jelliffe New York

82 **Herpetic Inflammations of Geniculate Ganglion.**—Hunt brings together three separate groups of cases which he believes constitute a new and distinct clinical entity The pathology of the affection is identical with that of herpes zoster of which it forms a part, the distinguishing features of the clinical picture depending entirely on the ganglion involved and the nature of the structures surrounding it. Hunt believes that the geniculate ganglion may be the seat of the herpetic inflammation The clinical types of the affection are herpes auricularis, herpes auricularis with facial palsy, and herpes auricularis with facial palsy and auditory symptoms The zoster zone for this ganglion is found in the interior of the auricle and in the external auditory canal Hunt reports two characteristic cases in full

83 **Brain Tumor Symptom-Complex.**—That conditions other than brain tumor may cause symptoms, general as well as focal, simulating brain tumor is shown by Hoppe, who reports three cases One of his patients died of pulmonary tuberculosis after having been under observation for 10 years for a supposed cerebellar tumor At the necropsy the brain was found to be normal in every respect. The examination of the brain included macroscopic as well as microscopic study There were no adhesions or any other lesion of brain or membranes Two patients are alive and well after two years and thirteen and a half years respectively In these two cases the symptoms also pointed to brain tumor and the diagnosis was made accordingly Therefore, Hoppe urges that clinicians should not be too pessimistic in their prognosis of brain tumors, especially in the cerebellar cases, and that they should not be too hasty in the recommendation of surgical intervention until therapeutic measures have been given a long and thorough test

84 **After Care of the Insane.**—Meyer gives a brief report on a movement which was inaugurated in New York state for the purpose of the after care of needy persons discharged from hospitals for the insane

85 **Experiment in Civic Medicine**—Schwab outlines the main purposes underlying the organization of a commission in St Louis whose function it is to cultivate a better standard of expert medical testimony and to train a group of experts in mental questions for service in the courts The central idea of the experiment is that all expert testimony should be given on the question at issue and should have nothing whatever to do with one side or the other in the actual legal test of a case In other words, it should be the expert's duty to inform the court on questions of the proper interpretation of facts lying within the limits in which expert knowledge is required. The commission consists of four members, and its report is transmitted to the circuit attorney, who, with the assistance of two judges in the criminal courts, appoints the commission The commission has no legal or official position and exists merely as a matter of convenience to the court The report of the commission is without bias or prejudice

87 **Migraine and Hemianopsia**—Whether attacks of migraine, in the absence of disease of the vessel walls, are capable of producing permanent changes in the nervous structures is the point discussed by Thomas As the result of careful study of several cases he concludes that attacks of migraine may result in an area of softening in the brain, which shows itself by a permanent paralysis, aphasia, or hemianopsia, and that in most instances this is due to the attack favoring a vascular lesion in persons who have already disease of the walls of the blood vessels, but that in certain cases the vascular lesion may occur in young persons whose blood vessels are in all probability in a normal condition In all cases of organic disease of the brain, coming on during an attack of migraine extreme caution is necessary before ascribing even an exciting rôle to the migraine, as it is much more common to find independent organic disease of the blood vessels which would account for the organic disturbance in persons who have suffered from migraine yet a few cases remain which can hardly be explained in this way, and justify the statement made by Charcot and others that the transient hemianopsia or aphasia seen occasionally in this disease may become permanent

88 **Peripheral Facial Diplegia with Palatal Involvement.**—Jacoby reports four cases under his observation, three of which showed palatal palsy

90 **Hemilingual Atrophy**—Jelliffe reports a case of simple hemilingual atrophy due to injury to the hypoglossal nerve at its exit from the skull

Therapeutic Gazette, Detroit.

March 15

91 Fractures of Femoral Neck—Anatomic Treatment. C E. Ruth Keokuk Iowa
92 Treatment of Arthritis Deformans. J H W Rhein Philadelphia.
93 New Substitute for Iodoform. J H Ford Indianapolis
94 Therapeutic Value of Arbovin. E. R. W Frank Berlin
95 Specific Medication in Treatment of Tuberculosis J Sawyer Asheville N C

96 Treatment of Coryza E S McKee Cincinnati
97 Directions for Determining Opsonic Index of Blood. E C L. Miller Detroit.

St. Louis Courier of Medicine
March

98 Operations for the Cure of Chronic, Suppurative Otitis Media Other than Radical Mastoid. S Spencer St. Louis
99 Cerebral Syphilis with Coma M J Lippe St. Louis.
100 Treatment of Gonorrheal Ophthalmia Neonatorum. W A. Shoemaker St. Louis

Medical Fortnightly, St. Louis
March 11.

101 Seeing Turkey with Medical Eyes. R. G Eccles, Brooklyn.
102 President's Address of the Quincy (Ill) Medical and Library Association J Robbins Quincy
103 Suprapubic Cystotomy as Preliminary to and the Route for Performance of Prostatectomies. W T Elam, St. Joseph.

Virginia Medical Semi-Monthly, Richmond.
March 8.

104 Pathologic Aspects of Genius L. G Pedigo Roanoke.
105 Surgical Treatment of Diseases of the Stomach. J S Horsley Richmond.
106 Clinical Considerations of Frontal Sinuses. W A. Wells, Washington D C
107 Value of Blood Examination in Diagnosis. D Vanderhoof, Richmond
108 Abdominal Surgery and the Ohio Valley R. Carothers Cincinnati
109 Principles of Surgery S McGuire Richmond.

Medical Standard, Chicago

110 Operative Treatment of Femoral Hernia. A. De Roulet, Chicago
111 Practical Roentgen ray Therapy N M Eberhart, Chicago
112 *Psychoses and Neuroses of Urethral Origin.* N E Aronstam Detroit Mich
113 The Mouth and Its Dangers. I Irwell Buffalo N Y
114 The Sigmoid Flexure and Mesosigmoid B Robinson, Chicago

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional interest.

British Medical Journal.
March 16

1 *Thoracic Aneurism T Oliver
2 *Aortic Disease G Rankin.
3 *Surgical Aspects of Hemophilia E W H Groves.
4 *Heart Anomaly of Cor Triloculare Biatriatum J D Mann
5 *Calcium Salts as Cardiac Tonics in Pneumonia and Heart Disease L. Brunton.
6 *Delayed Chloroform Poisoning J C Renton
7 *Chronic Peritonitis Causing Elephantiasis. J Bernstein and F W Price
8 *Relation of Diet to Thyroid Activity A D Fordyce.
9 *Class Incidence of Cancer D Heron.
10 *Insanity Its Causes and Increase. G H Savage

1 **Thoracic Aneurism.**—Oliver discusses the clinical history of this condition, which he believes is in at least 50 per cent. of the cases due to syphilis Other causes mentioned are sudden strain and injury, alcohol, and previous disease of the vessel walls Rest in bed and quietude, together with a restricted diet, are mentioned as essentials in the treatment. Iodid of potassium is said to give great relief, but does not produce a cure Speaking of galvano puncture, Oliver says that in one case of subclavian aneurism thus treated, the result was satisfactory, until, as the result of friction, the aneurism redeveloped and burst into the surrounding tissue

2 **Aortic Disease.**—Digitalis in combination with nitroglycerin is recommended very highly by Rankin in the treatment of aortic disease He says that the nitroglycerin prevents increase of peripheral resistance and so robs the digitalis of that influence on the arterioles on account of which its administration is supposed to be contraindicated Rankin is a firm believer in the efficacy of digitalis in the treatment of aortic disease when compensation has failed

3 **Surgical Aspects of Hemophilia.**—Rest and pressure are said by Groves to be the two essentials in the treatment of hemophilia from a surgical point of view When the joints become swollen they should be bandaged firmly, and kept at rest until the effusion subsides It is by neglect of this treatment that the ligaments become stretched and weakened, and the changes of osteoarthritis hastened Groves reports three cases of hemophilia which illustrate the hereditary nature of this affection In two of the cases, ischemic paralysis resulted from the disease

4 **Anomaly of Heart**—The patient whose case is reported by Mann was 35 years of age, and presented the usual appearance of one suffering from chronic heart disease The area of cardiac dulness was increased, the cardiac impulse was more extensive than usual, and the apex beat was difficult to locate There was no thrill The first sound was replaced by a loud, rushing, systolic murmur, which extended over the whole cardiac area The center of the impulse was about the fifth interspace, a little within the nipple line The heart beats were tumultuous and irregular, the veins were over filled, and those in the neck pulsated There was intense dyspnea and cyanosis with general edema and effusion into the serous sacs The patient died At the necropsy it was found that the heart had only one ventricle from which emerged two arterial trunks, and into which opened the mitral and tricuspid orifices, all in their normal positions The auricular portion of the heart presented nothing abnormal, except that the foramen ovale was patent The heart weighed 28 ounces The man had never been cyanosed until the last three weeks of his life, and he had never been ill in bed until his final illness When a boy, he had had attacks of breathlessness, cough or headache, which lasted for a day or two He was unable to join much in boys' sports

5 **Calcium Salts as Cardiac Tonics**—Brunton believes that the free use of calcium salts has a tonic action on the heart in cases in which there is a tendency to cardiac failure He has given calcium chlorid in doses of from five to ten grains, dissolved in water, every four hours, with most excellent results in cases of impending cardiac failure in pneumonia The disagreeable saline taste of the salt is covered by one minim of the elixir of saccharin, containing 1/20 of a grain of saccharin for each ten grains of calcium chlorid The mixture is given in water or milk and is said not to interfere with the use of other remedies The salt has also proved efficacious in cardiac disease, when the ventricular wall appeared to be losing power In such cases, the lactophosphate or glycerophosphate of calcium may be employed

6 **Delayed Chloroform Poisoning**—Renton reports two cases in which symptoms of delayed chloroform poisoning were observed in adults four days after the administration of the anesthetic

7 **Chronic Peritonitis Causing Elephantiasis**—Bernstein and Price report a case of general anasarca, edema and elephantiasis, the result of a chronic peritonitis At the necropsy, there was found prominent perihepatitis, perisplenitis and prevertebral fibrosis surrounding the lymphatics at about the level of the receptaculum chyli Below this, was a varicose condition of all the lymphatics and edema and hyperplasia of the parts drained by these affected vessels, but not of the mesenteric lymphatics or lacteals

8 **Diet and Thyroid Activity**—Fordyce carried on a series of experiments on rats, with a view to ascertaining whether or not diet had any effect on thyroid activity The diet given consisted of (1) Bread and milk, (2) fresh milk (3) the same milk pasteurized, (4) the same milk boiled for thirty minutes In all cases an unlimited supply was given Fordyce found that the variations in the series of glands examined corresponded with the differences in the diet In the milk fed rats the gland vesicles were large and well filled with colloid material The lining cells were small, with deeply stained nuclei In the glands of the bread and milk fed rats, the vesicles were very markedly smaller and the amount of colloid present very considerably less The lining cells were columnar

9 **Class Incidence of Cancer**—Heron says that there is always a substantial correlation between the cancer death rate and social status that is the incidence of cancer is most heavy among the well to-do classes

10 **Insanity**—Savage claims that there is no such disease as insanity that it is a negation and depends more on the social than on the medical conditions that certain forms are due to direct brain decay others to brain intoxication and others to morbid habit or morbid surroundings or are the

natural but morbid mental growths occurring in certain unstable individuals

The Lancet, London.

March 16

11 *Acute Infective or Toxic Conditions of the Nervous System E F Buzzard.
12 *The Renal Function in Its Relation to Surgery J W T Walker
13 Diagnosis and Localization of Cerebral Tumors C E Beevor
14 *Insanity with Special Reference to Prognosis A R Urquhart.
15 *Medical Treatment of Congenital Pyloric Stenosis G A. Sutherland
16 Tertiary Syphilitic Fever and the Visceral and Other Changes Connected With It. E P Weber
17 *Survey of 170 Cases Clinically Diagnosed as Colle s Fracture R. Morton
18 Use of Aceto Salicylic Acid in Rheumatic Endopericarditis. E C B Ibotson
19 Rôle of Blood Plasma in Disease H Campbell

11 **Infective or Toxic Conditions of the Nervous System.**—The following deductions are made by Buzzard from his investigations

1 Organic and inorganic substances when present in the lymph spaces of nerves tend to be carried centralward toward the spinal cord and meninges, and especially through the posterior spinal roots 2 Entry into the spinal cord is made chiefly along the various septa within the lymph channels of the radial vessels and along the anterior but more particularly the posterior roots 3 The same substances within the spinal cord and its membrane appear to travel upward mainly between the meninges and along the central canal 4 The changes within the cord resulting from its bacterial or toxic infection through these lymph channels are somewhat patchy and irregular, affecting the gray and white matter alike, with a special incidence on the posterior columns 6 The morbid histologic processes consist of toxic changes in ganglion cells, blood extravasations, small round cell infiltration of the tissues and perivascular sheaths, some proliferation of neuroglia cells, and parenchymatous degeneration of the nerve strands

12 **Renal Function and Surgery**—In this, the first lecture on this subject, Walker takes up the estimation of renal function He says that as a measure of the total renal function the phloridzin and methylene blue tests are most trustworthy The phloridzin method is open to the objection that it is too easily influenced by slight variations in the renal function At present the methylene blue test is the method by which most trustworthy information can be obtained and appears to form a valuable addition to the clinical methods of estimation of the renal function

14 **Insanity**—Urquhart says that prognosis in insanity must proceed on a wide and careful review of the whole circumstances affecting the individual, who is in a degenerative condition physically and therefore mentally All that goes to make up that degenerative condition must be separately investigated and summed up The elements of prognosis are analytical and synthetical, and it is determined by the nature of the degree of the involvement of the organism in the widest sense If all the functions are involved, if the degenerative process is universal and intractable, the future of the individual is desperate indeed, if the defect is partial and amenable to treatment naturally the case is more hopeful as these limitations of involvement decrease

15 **Medical Treatment of Congenital Pyloric Stenosis**—Sutherland discusses the treatment of congenital pyloric stenosis by means of dieting and gastric lavage, and reports three cases that have come under his care, in two of which the treatment proved successful In the third case it became necessary to resort to stretching of the pylorus, but the patient died.

17 **Colle's Fracture**—Morton made a very careful radiographic study of 170 cases of what was diagnosed clinically as Colle's fracture In 155 cases the radius only was fractured, the ulna in 2 cases, both bones in 7 cases the trapezium in 1 case, no fracture detected in 5 cases, dislocation of wrist joint complicating fracture in 3 cases, fracture communicating with the wrist joint in 25 cases, fracture of the styloid process of radius in 20 cases of the ulna in 88 cases separation of one or both epiphyses in 11 cases

British Journal of Children's Diseases, London

February

20 *Hematuria in Infants and Young Children J P Parkinson
21 Alcoholic Cirrhosis of Liver in Children F Jones.
22 *Congenital Symmetrical Sinuses of Lower Lip H S Clogg

20 **Hematuria in Infants.**—Parkinson reports a case of infantile scurvy in which hematuria was the only obvious sign of the disease, although on closer examination other signs were discovered In another case, a congenital renal tumor caused hematuria, while in a third, hematuria followed scarlet fever In the latter case Parkinson found dry cupping over each kidney of great value in checking the hemorrhage

22 **Congenital Sinuses of Lower Lip**—The child, whose case is reported by Clogg, was born with a severe degree of bilateral hare lip and cleft palate, the premaxilla stood out prominently The latter was broken and bent backward, and the upper lip repaired over it The interesting condition was, however, seen on the lower lip On the upper surface of this lip on either side of the middle line was a papilla, the two papillæ were symmetrical, and surrounding them in the form of a semicircle on the aspect toward the mouth was a groove, and leading from this furrow was a sinus, which passed downward into the lip for about a quarter of an inch. The two sinuses ended blindly, converging slightly, and were situated immediately beneath the mucous membrane of the lip Issuing from the sinuses was a mucoid secretion

The Practitioner, London

March

23 Diagnosis and Treatment of Infective Throat Conditions M Young
24 *Sphincteric Control of Male Bladder and Its Relation to Prostatectomy C. A Ball
25 *Hemoptysis and Its Treatment. P S Hichens
26 *Cesarean Section A J Wallace.
27 *Postpartum Hemorrhage E H Tweedy
28 Embolism A Hall
29 *Antiseptic Action of Metallic Sutures C Leedham Green
30 Measurement of Neck of Femur J H Pringle
31 *Physical Methods of Treating Heart Disease A. G Bennett.
32 Diseases of Stomach F C Moore

24 **Sphincter in Control of Bladder and Prostatectomy**—It is well known that after prostatectomy, the control of micturition is usually somewhat abnormal at first, but quickly becomes apparently normal Ball thinks that this is probably owing to the compensatory powers of the compressor urethræ muscle He says that whether or not the internal sphincter of the bladder acts after suprapubic prostatectomy is a point which must be ascertained by necropsies on patients some years after the operation But it seems quite incorrect to argue, he says, from operations on patients with enlarged prostates, that the chief sphincter of the bladder normally lies in the membranous urethra

25 **Treatment of Hemoptysis**—Hichens advises putting the patient to bed in a cool, airy room, in a propped up position, giving him an injection of morphin, letting him have some turpentine to inhale, and reassuring him of a favorable outcome The patient should be put on a calcium chlorid mixture, have his bowels kept well open by a saline purgative, have a cool and partly dry diet, and ice to suck to relieve thirst If the hemoptysis is persistent, or recurrent, Hichens would use nitroglycerin

26 **Cesarean Section**—Wallace has done a Cesarean section sixteen times the indication for interference being deformity of the pelvis in 13 cases and obstruction by tumors in three cases The 13 operations for pelvic deformity were performed on nine women, six of whom underwent section once, two twice, and one thrice In the three cases, in which tumors formed the obstacle to delivery, obstruction was offered by advanced carcinoma of the cervix of the uterus in one case, by a large intraligamentous fibroid in another, and by a dermoid cyst of the left ovary in a third Of the 16 operations, one resulted fatally to the mother, so that the maternal mortality was 6 25 per cent All the children were delivered alive, but one survived only a few hours The maternal fatality was due to sepsis, the result of several attempts at delivery before Cesarean section was done

27 **Postpartum Hemorrhage**—Tweedy subscribes to the efficiency pressure exerted on the abdominal aorta as a means of temporarily controlling postpartum hemorrhage

28 **Embolism.**—Hall discusses multiple embolic aneurisms and fatal pulmonary embolism, citing cases in illustration

29 **Antiseptic Action of Metallic Sutures**—In the case of the majority of the metals tested by Leedham Green as to their antiseptic action, the presence of a wire loop in gelatin inoculated with the staphylococcus aureus seemed to have little or no influence on the growth of the micro organism On the other hand, it was evident that some of the metals had a distinct and powerful inhibitory action on the growth of the germ In these cases, the culture medium in the immediate neighborhood of the wire loop remained free from bacterial growth, thus forming a clear, transparent halo about the metal ring Gold, platinum, tin, magnesium, nickel, lead, silver and aluminum were found to possess practically no inhibiting power Iron exhibited a variable action, dependent on whether oxidation was favored or hindered If no oxidation took place, then no inhibitory action could be detected, when there was free oxidation, the inhibitory action was decided By far the most powerful of the metals, bactericidally, proved to be copper, and in a less degree (according to the percentage of copper used in their composition), its alloys, bronze and brass Similar experiments were made with screws and nails, and the results were the same as in the case of the wire

31 **Methods of Treating Heart Disease**—In this, the third paper of the series, Bennett discusses the matter of diet, what to eat, how to eat, and how to prepare properly what we eat

Dublin Journal of Medical Science

March

33 *Treatment of Gastric Ulcer J Little
34 *Treatment of Non malignant Gastric Ulcer C Ball
35 *Gastric Ulcer Its Diagnosis and Treatment J A. Lindsay
36 *Treatment of Gastric Ulcer from Surgical Standpoint. A B Mitchell

33 **Treatment of Gastric Ulcer**—Little says that during his practice before gastric ulcer was made a disease for surgical intervention, all his knowledge of the appearances of gastric ulcers was gained by seeing them in cases which had become fatal from perforation In other words, he can not recollect a case in which gastric ulcer ended fatally either by gradual exhaustion, or by hemorrhage He says that with some exceptions the remedy for gastric ulcer is confinement to bed Diet and medication are of some importance, but the kind will vary with the individual case Little says that doubt as to the value of surgery in the treatment of bad stomachs has been somewhat suggested by the fact that of late years a few people have consulted him for stomachs which still gave them great trouble, and when noting the principal signs he found that there was a scar, five inches long, in the linea alba

34 **Treatment of Non Malignant Gastric Ulcer**—Ball urges that all cases of uncomplicated gastric ulcer which have had a reasonable trial of treatment by rest and limited diet without very marked improvement, should be subjected to gastro enterostomy He prefers the posterior operation

35 **Gastric Ulcer**—Lindsay says that the physician should recognize that the intervention of surgery in the treatment of gastric ulcer has been of great value, and that he should be careful not to postpone too long his appeal for assistance to a surgical colleague He should seek that assistance in most, if not all relapsing and chronic cases On the other hand, the surgeon should recognize that his assistance is required only in a minority of such cases, that a full, and even patient trial of medical measures is always the first duty, and that he should be chary of mere exploratory operations

36 **Id**—In Mitchell's opinion, exploratory operation is an unscientific proceeding He says that there should always be some definite diagnosis, and that operations should be undertaken with a deliberate object in view It is wrong to open the abdomen, to see whether it ought to have been opened He thinks that a properly performed gastrojejunostomy may be relied on to cure 90 per cent of the patients, and that those in whom failures occur will be found to have some other ailment militating against success He says that after a fair trial of medical treatment without satisfactory results, operation should be considered before the health of the sufferer is undermined and the stomach so deformed or adherent as to require some elaborate and dangerous surgical procedure

Semaine Médicale, Paris

37 (XXVII, No 7 pp 73 84) *Torsion of the Great Omentum (Torsions du grand épiploon) F Lejars
38 (No 9 pp 97 108) *IsThere Such a Thing as Acute Dilatation of the Heart? (Existe-t il une dilatation aigue du coeur?) L. Cheinisse.
39 *In What Conditions Has a Physician the Legal Right to Employ a New Non authorized Serum (Droit d employer un sérum nouveau non autorisé)
40 (No 10 pp 109 120) *Decapsulation of the Kidney in Treatment of Eclampsia. (Decapsulation du rein dans l éclampsie) R. de Bovis
41 (No 11 pp 121 132.) *Importance of Arterial Hypertension in Diagnosis and Prognosis of Eclampsia (Ecl puerp et tension artérielle.) H Vaquez.

37 **Torsion of the Great Omentum**—Lejars reports what he thinks is the first case of volvulus of the great omentum diagnosed before operation In the 66 cases on record, he says, the volvulus occurred in the majority with a right inguinal hernia, in others with an empty hernia or without hernia His patient was a man of 37, sent to the hospital on a diagnosis of appendicitis at the eleventh day He had had right inguinal hernia for 20 years, kept under control with a truss, and was suddenly seized with colic and diffuse pain throughout the abdomen, vomiting and slight rise in temperature There was no constipation, and the pain finally settled in the right iliac fossa and flank. A large rounding mass could be palpated in the right half of the abdomen, extending from the crural arch to above the umbilicus It was doughy, slightly nodular, nowhere fluctuating, and palpation was uniformly painful Below, the tumor seemed to be connected with the contents of the hernia by a thick cord crepitating a little under the finger but not tender There was dulness over the entire region occupied by the tumor and the hernia By this time there were no reactions, no nausea, stool was apparently normal and temperature only slightly above normal The connection between the hernia and the mass in the abdomen and the comparative mildness of the symptoms suggested the diagnosis of volvulus of the great omentum, which was confirmed by the operation The part of the omentum involved in the hernia was twisted and again, close to the transverse colon, where the entire mass had twisted three times on its axis The torsion at this point was readily corrected and the mass was cut away just above The appendix was adherent to the mass and was removed with it The wound was sutured over two small drains and the patient rapidly recovered A hernia offers favorable conditions for the development of volvulus of the omentum even if the hernia becomes spontaneously corrected in time, although seven cases are on record in which the torsion was entirely intra abdominal with no tendency to hernia This group includes Stewart's case published in THE JOURNAL, March 19 1904 The evolution of a volvulus of this kind is generally slow, and the reactions mild but nevertheless the condition is a grave one and may terminate in gangrene or complete detachment of the omentum from rupture of the twisted pedicle In the 66 cases on record seven of the patients died It is wise to operate at once when the condition is recognized as adhesions grow constantly more numerous and harder to detach It is also wise to examine the omentum up to the transverse colon as there may be torsion at more than one point In von Eiselsberg s case the volvulus in the hernia was rectified but at autopsy it was found that the omentum was twisted at three other points above not suspected at the operation He states that the entire "tumor" must be removed into sound tissue, even if it requires the ablation of the whole of the omentum

38 **Acute Dilatation of the Heart.**—Cheinisse discusses whether or not it is possible for a sound heart in a healthy person to become suddenly dilated as a result of overexertion and then to subside rapidly again to norm He rev[illegible] recent literature on the subject of ph[illegible] effects on the heart as studied by [illegible]

radioscopy, and concludes that the evidence is rather against the possibility of physical exertion producing acute dilatation of a sound heart in healthy individuals. On the other hand, the evidence shows that this is liable to occur in case of sudden emotional stress, especially in neurasthenics. Chemisse has already demonstrated that emotional stress, intense anxiety, is able to induce the development of acute organic affections of the nervous system, and he thinks that somewhat the same mechanism explains the acute dilatation of the heart observed in apparently healthy individuals. Marmorstein reported last year two such cases caused by the rioting at Odessa. The patients were Jews, and the emotional shock at the spectacle of murder and pillage in their homes induced acute dilatation of the heart, which subsided after a few hours. Both of these patients had a history of neurasthenia. The cases resemble those related by Kress in which acute dilatation of the heart was observed in two neurasthenics in the course of transient psychic disturbances. The emotional stress acts on the vasomotor nerves, the arterial spasm inducing a hypertension which reacts on the myocardium. It is also possible that the moral shock has, further, a direct action on the centers regulating the innervation of the heart. The suddenness of the moral shock annuls the power of adaptation which protects the heart against physical over exertion under the circumstances.

39.—See news item in THE JOURNAL for March 16, page 958.

40. **Unilateral Decapsulation of Kidney in Treatment of Eclampsia.**—De Bovis adds another to the five cases of eclampsia of which he has knowledge in which Edebohls' technic of decapsulation of the kidney was applied. His patient was a frail young woman with traces of albuminuria when she entered the hospital in labor at term. Four hours after 10 hours of labor and normal delivery, eclamptic convulsions occurred and returned about every hour, with 17 spasms in all between 9 a. m. and 6 the next morning. At this time the patient was still unconscious and extremely restless, with incontinence of urine, pulse 90, the lungs slightly congested, the face moderately cyanotic. The operation of decapsulation according to Edebohls' technic was performed at 10 a. m. on one kidney, consciousness returned by 5 p. m. and recovery was soon complete. This is the first case of unilateral decapsulation in eclampsia on record. In this case and in two others there were no signs of "renal glaucoma" as the condition of extreme congestion and hypertrophy of the organ has been aptly called. The kidney was smaller than usual with a large ecchymosis on the convex side. There was not the least tendency to hemorrhage, so that the benefit could not have been due to loss of blood. The aim is to aid the functioning of the kidneys and an operation on one kidney alone might be sufficient, as in the case reported. De Bovis is inclined to believe that nephrotomy should be reserved for the cases with anuria or extreme oliguria. He cites Büttner's statistics, taken from the midwives' register in Mecklenburg, showing the mortality in 509 cases of eclampsia. During pregnancy, 4.5 per cent. of 22 cases, during labor 24.4 per cent. of 323 cases, and after delivery, 30.4 per cent. of 164 cases. These figures justify intervention, he thinks.

41. **Eclampsia, Result of Arterial Hypertension.**—Vaquez reviews the various theories in vogue in regard to the etiology of eclampsia and points out their fallacies. None of them, he says, has taken account of the main and essential feature of eclampsia, the arterial hypertension, which he regards as the essential symptom, testifying to vascular disturbances whose existence and importance have heretofore been disregarded. Lesions in the liver or kidneys are not constant, and when present, are the result of the disturbances which they are supposed to explain. The origin of the hypertensive vascular spasms which are the essence of the eclampsia, causing the convulsions and the modifications in the viscera, is still a mystery. The most plausible hypothesis ascribes it to some disturbance in the vascular glands, the thyroid, suprarenals or chromophile glands which regulate the arterial pressure and which have such an important influence on the genital sphere in women (puberty, menstruation and menopause). During the last 10 years he has been studying the arterial pressure in cases of eclampsia, and with the Basch Potain sphygmomanometer has always found it from 10 to 14 cm., mercury, higher than normal. When the sphygmomanometer reveals a great increase in the arterial tension the convulsions are not long in making their appearance. If the tension persists high, further trouble may be anticipated. The hypertension does not depend on the convulsions, but precedes them. In one case a woman had apparently recovered from puerperal eclampsia a month before, but intense headache and maniacal excitement persisted. The arterial tension remained high—23 cm.—and in a few days the patient died in delirium, after a few terminal convulsions. Another patient who had exhibited only symptoms of impending eclampsia, with persistent high arterial tension, succumbed three weeks later to sudden meningeal hemorrhage, complaining in the interim only of recurring headache. In cases with a favorable prognosis, the arterial tension rapidly subsides nearly or quite to normal, with a few transient rises at times. The patient may succumb after the arterial tension has returned to normal and all convulsions have long ceased, as the extremely high tension may have induced irreparable lesions at some point.

The practical conclusions of Vaquez' long article are that it is necessary to examine the blood pressure as systematically as the urine in case of threatening eclampsia, both for diagnosis and for prognosis. He affirms positively that eclamptic convulsions will never be encountered in women with normal arterial tension, while they may be apprehended whenever the arterial tension is found unusually and persistently high. There is no hypertension, he states, in physiologic pregnancy and parturition. Among the signs of hypertension are the accentuation of the second aortic sound and dilatation of the arch of the aorta. Percussion may also disclose dilatation of the left ventricle, and examination of autopsy records will show that hypertrophy of the left ventricle is frequently encountered in eclampsia. Both this and the dilatation of the aorta do not appear until the hypertension has lasted for some time, consequently they generally indicate, when found, that the hypertension has long preceded the vascular spasms and the eclampsia. In one case a woman had a pressure of 25 cm. when she entered the maternity and eclampsia was apprehended. Delivery occurred the next day, followed by eclampsia which soon terminated in fatal coma. Sometimes the high arterial tension is accompanied by amaurosis, tetany, mania or the like, without actual eclamptic spasms, although the tension may be at 25 or 27 cm. On the other hand, a tension of only 18 or 19 may coincide with true eclampsia, but it generally rapidly subsides in this case and the tension drops gradually to normal (13 or 15 cm.).

The modifications in the heart and vessels noted in impending or established eclampsia are not peculiar to this affection. They are encountered likewise in uremia, especially in the form with convulsions, and in lead colic even when there is no suspicion of kidney trouble. The modifications in the vascular system and heart are merely the expression—equally significant in eclampsia, convulsive uremia and lead colic—of the abnormally high arterial tension. Sudden and rapidly subsiding amaurosis, certain forms of tetany, the maniacal delirium of pregnancy and after parturition, and the cases of "eclampsia without convulsions," are all links in the chain of eclampsia, all depending on the arterial hypertension. In eclampsia these various manifestations may all be crowded into a few hours, while in uremia they may string along through months and years. There is no other affection, Vaquez adds, accompanied by such high arterial tension as eclampsia, and there is no other which is so habitually characterized by hemorrhagic phenomena.

Toxic or infectious processes have been supposed to be responsible for the hemorrhagic foci, but Vaquez thinks that they are explained much better by mere mechanical conditions. When the arterial pressure rises in a few days from 14 to 26 or 28 cm., actually doubling, the only cause for wonder is that the vessel walls do not rupture even more frequently. This is probably due to the fact that eclampsia generally occurs in young women with sound vessel walls, able to stand considerable strain. When rupture does occur, the

amount of blood that escapes is usually in proportion to the degree of arterial tension What he calls "meningeal epistaxis" is extremely frequent in eclampsia, revealed by the presence of red corpuscles in the cerebrospinal fluid even when there is no copious hemorrhage in the membranes Ménétrier has recently reported a case of lead poisoning with convulsions in which the blood pressure measured 27 cm, without a trace of organic lesions to be discovered at autopsy Vaquez believes that nothing but mechanical conditions will explain the sudden onset of the kidney disturbances in eclampsia, their intensity and the rapid return to normal—this "eclipse of the kidneys," as he calls it In one case reported, the urine contained 0 5 gm of albumin the first day, 62 gm the second, 37 gm the third, and 0 2 gm the fourth day, with a corresponding increase and decline in the proportion of acetone and bile pigments and normal conditions by the fourth day Any individual who has had repeated attacks of arterial hypertension from vascular spasm is threatened with chronic hypertension in after years, as he shows by examples from his clinical experience

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41 (LXXXI, No 1 pp 1 270 *F A Kehrer Festschrift*) *Chemical Differences Between Human and Cow's Milk. (Chemischen Unterschiede der Menschen und Kuhmilch) P Biedert
43 *Abdominal Cesarean Section in Comparison with Other Operations in Case of Contracted Pelvis (Suprasymphysäre Entbindung) F Frank
44 *Physiology and Dietetics of Third Stage of Labor (Nachgeburtsperiode) K Heil
45 Two Cases of Complication of Pregnancy with Wandering Spleen. (Schwangerschaft Geburt und Wochenbett bei Wandermilz) K. Heil
46 *Importance of Icterus During Pregnancy for Mother and Child. (Bedeutung des Ikterus für Mutter und Kind) E Kehrer
47 Physiologic and Pharmacologic Researches on the Isolated Uterus (Untersuchungen an den inneren Genitalien.) Id
48 Three Cases of Repeated Ectopic Pregnancy (Wiederholte ektopische Schwangerschaften) Kuppenheim
49 Embryonal Deductions from Case of Uterus Bicornis and Bipartitus (Uterus bicornis—subseptus—unicollis cum vagina subsepta) J Schottlaender
50 Regulations in Prussia for Notification of Suspected Cases of Puerperal Fever (Anzeigepflicht für Puerperalfieber) O Zillessen

42 **Chemical Differences Between Human and Cow's Milk.**—Biedert reviews the progress made since he presented an inaugural thesis on this subject 40 years ago, the first ever devoted to this theme, he believes It was prepared under Kehrer's supervision and, among other points, emphasized the necessity for chemical examination of infants' stools as a guide to treatment This will differentiate at once the cases in which the digestion of fats is defective from those in which fat digestion proceeds normally The former require abstention from fat, while the latter thrive on it

43 **Abdominal Cesarean Section in Comparison with Other Operations for Contracted Pelvis.**—Frank reports 13 cases in which he performed this operation All the patients had been manually examined with little regard to asepsis before entering the maternity The results of the operation were excellent in every instance He regards delivery by the abdominal route as affording more favorable conditions for the mother than delivery by the natural passages later if accompanied by much trauma This is particularly evident in already infected cases, as he shows by examples Abdominal delivery he thinks is free from danger, comparatively speaking and he believes it is destined to prove the standard procedure in cases of contracted pelvis. He recognizes certain indications for the pelvis enlarging operative measures, but adds that unforeseen mishaps are liable to occur, as he knows from personal experience The degree of contraction of the pelvis is immaterial for Cesarean section, and febrile conditions are no contraindication The operation is not able to cure infection in the uterus any more than other measures but the child is saved, fatal septic peritonitis is avoided and better conditions are afforded for combating the uterine infection than by any other technic.

44 **Physiology of Third Stage of Labor**—In Heil's experience with a series of 120 parturients the placenta was ready to be expelled within thirty minutes after the birth of the child He tabulates the findings according as the uterus was still contracted and like a ball, or as it had "flattened out." He concludes that it is not advisable to wait longer than half an hour for expression of the placenta in case of physiologic delivery and, in the interests of the rest requiring parturient, it is not desirable He examines in from 10 to 15 minutes after delivery to see whether the uterus is still contracted into a ball or has flattened out In case of the latter finding, it can safely be assumed that the placenta can be readily expressed at the end of the half hour He regards this flattening of the uterus as a sign of the descent of the detached placenta into the passage below, and fully as reliable an indication as the lengthening of the umbilical cord

46 **Importance of Icterus During Pregnancy**—E Kehrer adds another to the 11 cases on record in which catarrhal icterus developed during the course of a pregnancy His patient had long suffered from occasional slight icterus, and it assumed serious proportions at about the sixth month of her first pregnancy The case is distinguished by the prolonged catarrhal icterus, the severity of its manifestations and accompanying cutaneous hemorrhages, pruritus and diarrhea, by the hemorrhagic diathesis observed in the child—observed likewise in Frank's case—and by the signs of mild osteomalacia and crural neuritis during the puerperium. The icterus vanished after delivery In 2 other cases icterus coincided with uncontrollable vomiting, albuminuria and ptyalism in pregnant young women The icterus of pregnant women is a serious condition on account of the cholemic hemorrhages, the loss of sleep from the itching, the emaciation from lack of appetite and from diarrhea, the liability to periods of excitement and to infection from scratching the itching skin, and also the tendency to osteomalacia and neuritis from the elements of the bile circulating so long in the blood But the condition is still more dangerous for the child in some cases Premature delivery occurred in 26 out of the 30 childbirths of 8 women with this icterus during pregnancy In only 2 cases did delivery occur at term, and only 11 of the 31 children were born alive In another group of 7 cases of catarrhal icterus, cholecystitis or cholangitis, only 4 of the children were born alive and one was scarcely viable Lomer collected from the literature 57 cases of catarrhal icterus plus acute yellow atrophy of the liver in pregnant women, and the intrauterine death of the fetus was noted in 45 cases Kehrer regards it as strange that pediatrists writing of the hemorrhagic diathesis in children never mention whether or not the mothers had icterus during the pregnancy In 28 cases the child of a mother with icterus and acute yellow atrophy of the liver presented no signs of icterus, while in 7 other cases congenital icterus was observed also in the child Experimental research is further related which shows that the healthy placenta in laboratory animals does not allow the passage of the elements of the bile to the fetus but responds with extreme hyperemia to the intoxication of the maternal organism In treatment the usual measures for icterus are advised if the condition does not last more than two or three weeks If it persists longer than this or increases in intensity, it is much better to induce delivery and to rear the child in an incubator with a wet nurse than expose it to the almost certain danger of the hemorrhagic diathesis or icterus, as every day new amounts of the elements of the bile are being poured into it, poisoning its blood more and more As the bile acids pass into the milk of women with icterus, it is best to substitute the milk of some other woman even when the children are born apparently sound Some substance that will neutralize the bile salts in the maternal blood may yet be discovered but, he states none is known as yet

Deutsche medizinische Wochenschrift, Berlin and Leipsic

41 (XXXIII No [illegible] pp 249 288) *Treatment of Impotence* (Impotenz.) Fürbringer
42 *Proteolytic Ferment Action as Differentiating Test for [illegible] purations (Müller Jochmann sches Verfahren) H Kelsch and L. Müller
43 Hay Fever in 1906 (Heufieber im Jahre 1906) A We[illegible] Lisner
44 Great Value of Calomel as Art[illegible] septik in der Geburtshilfe) T[illegible]
45 Later Literature on Dilatation of [illegible] liche Erweiterung des Uter[illegible])

56 Protecting Devices for Roentgen Room (Schutzvorrichtungen) F Davidsohn
57 How to Prescribe Protargol (Rezeptur des Prot) F Goldmann
58 Causes of Inhibition of Growth of Bacteria in Cultures (Ursache der Wachstumshemmung) C Eijkman
59 (No 8 pp 289 328) Breast Nursing in Medical Practice (Natürliche Säuglingsernährung) H Neumann Post graduate lecture
60 *Epidemic Cerebrospinal Meningitis (Genickstarre) Knauth
61 Inefficacy of Atoxyl in 2 Cases of African Relapsing Fever (Wirkung des At. bei afrik. Rückfallfieber) A Breinl and A Kinghorn
62 *Metastases of Hypernephroma (Hyperneph Met) E Hoffmann
63 *Treatment of Hemorrhoids with Injections of Alcohol and Carbolic Acid After Temporary Wire Ligature (Behandlung der Häm) D Franck
64 Corset for Scoliosis with Pressure from Interposed Rubber Sponges (Neues aktives Korsett) Heermann

52 **Differentiation of Pus of Various Origins by Proteolytic Ferment Action**—This article describes further applications in the clinic of the Müller Jochmann test for differentiation of pus by the proteolytic action of the ferments The test is proving extremely reliable, the high temperature insuring the sterilization of the material and hastening the action of the ferment. A few drops of the pus to be examined are placed on the smooth surface of a Loeffler plate, that is, a Petri dish containing a rather thick layer of hardened beef or sheep serum The plate is then placed for 24 hours in an incubator at 122 or 131 F In case the pus contains a proteolytic ferment, each droplet digests the serum below it and the result is a little hollow at the point of contact In case there is no proteolytic ferment present, the droplets merely dry on top of the serum with no tendency to hollow it out This is what is always observed in case of pus from pure tuberculous processes More than 100 tests with pus from carbuncles, acute gonorrhea, appendicitis and dozens of other affections, all induced by cocci or colon bacilli, invariably showed pronounced proteolytic digestion and consequent dimpling of the hard serum on the Loeffler plate The lack of evidences of pronounced proteolytic ferment action is therefore a sign of a pure tuberculous process The presence of the proteolytic action, however, does not exclude tuberculosis, as there may be mixed infection or the findings may be disturbed by preceding iodoform treatment, or by admixture of fresh blood

60 **Epidemic Cerebrospinal Meningitis**—Knauth reviews the experiences of the last thirty years in the Bavarian army in regard to epidemic cerebrospinal meningitis He ascribes it to various causal agents in different epidemics, the pneumococcus cases being apparently the least serious, although commencing with an unusually stormy onset

62 **Metastases of Hypernephroma**—Hoffmann reports 2 cases in which a hypernephroma had developed in the kidney without attracting attention The patients applied to a physician only when metastatic affections in the bones or elsewhere were observed In the few similar cases on record the bone affection was assumed to be primary and was treated as such In Israel's case two small lumps in the ribs were the first signs of trouble Albrecht has also reported 4 cases out of 28 of hypernephroma in which a tumor in the bone was the first lesion noted In these cases, the tumor was removed on the diagnosis of myelogenic sarcoma or tuberculous osteoperiostitis With Hoffmann's first patient, pains in the legs and shoulders were the first symptoms, explained by small tumors discovered at the autopsy with numerous other metastases in the spleen, pleura and elsewhere In the second case, a tumor at the entrance of the urethra, another in the vagina and a third on the inner surface of the thigh were found at the first examination, and the structure of the latter tumor was found to be similar to that of a hypernephroma These experiences suggest the importance of bearing the possibility of hypernephroma in mind when consulted on account of a tumor, especially a tumor in the bone by a patient past 50 even when no local or remote symptom points to a kidney tumor

63 **Treatment of Hemorrhoids**—Franck applies a polyp snare to the nodule, under local anesthesia, and slowly tightens the wire loop around the base of the nodule until it becomes extremely congested Holding the loop tight in the left hand, he injects with the other hand from one fifth to one-third of the contents of a Pravaz syringe filled with 50 per cent carbolized alcohol In from 5 to 10 minutes the nodule has hardened completely under the influence of the injection and the constricting loop is then loosened, and the next nodule attacked He advocates this technic for all chronically inflamed or bleeding hemorrhoids when there is any hesitation about applying general anesthesia Deep fissures are the only contraindication, they require cauterization The use of the polyp snare renders the operation much simpler and easier than when a silk ligature is used

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65 (LXV No 1, pp 1 128) *Alimentary Intoxication in Infancy (Al Intox. im Säuglingsalter) H Finkelstein
66 *Development of Children Who Had Convulsions During Infancy (Entwicklung eklamptischer Säuglinge in der späteren Kindheit) M. Thiemich and W Birk. Concluded in No 2
67 Pathogenesis of Bone Changes in Infantile Scorbutus (Knochenveränderungen bei Morbus Barlow) G Schmorl
68 *Operative Treatment of Diphtherial Stenosis of the Larynx in Infants. (Op Beh der Diph Stenosen des Kehlkopfes bei Säuglingen) W Moltschanoff
69 Pathology of Infantile Scorbutus (Barlowsche Krankheit.) M Flesch
70 (No 2 pp 129-262) *Tuberculosis of the Flat Bones of the Skull (Tub der platten Schädelknochen) M Reber
71 *Obstipation in Consequence of Kinking of Intestine (Obstipation infolge Darmabknickung) R Pfisterer

65 **Alimentary Intoxication in Infants.**—Finkelstein relates his experiences in years of research on this subject, with special regard to the collapse, disturbances in consciousness, peculiar change in the rhythm of respiration, alimentary glycosuria, fever, diarrhea, albumin and tube casts in the urine, abrupt decline in weight and leucocytosis The presence of these nine factors in the clinical picture is indispensable for the conception of what he entitles "alimentary" intoxication The leucocytosis approaches but seldom reaches 30,000 The respiration is deeper and faster, and the gestures, instead of the "angular," rapid movements of health, become rare, languid and "rounded," the corners of the mouth are drawn down, the arms and legs take unusual positions, sometimes stretched out, sometimes drawn up, relaxed or rigid The lower blood pressure brings a livid tone to the complexion, with shadows around the eyes It is important to see the child at rest to detect this intoxication in its incipiency, when the child is aroused these signs alter The stools may be approximately normal even with these symptoms of serious intoxication The sugar in the urine and the deep breathing differentiate this intoxication from the numerous infectious diseases which may be accompanied by some of the other signs He suggests that these two signs may also prove useful for differentiating in adults brain affections from disturbances due to autointoxication, such as acetonemia and dyspeptic coma In infants the appearance of the pathognomonic symptom complex is an indication that a new specific process is going on in the organism It is liable to be followed by specific, profound modifications of the metabolism All the functions suffer, as he relates in detail The intoxication is the expression of a regular reaction of the organism which always occurs when injury from any cause, such as an infectious affection or process or any deleterious influence, reaches a certain intensity The intoxication is not the work of bacterial toxins, but of metabolic toxins, a sharp distinction should be made between them in this respect Research is needed on the nature of the substances inducing the intoxication The conditions are somewhat similar to those observed in uremia

66 **Later Development of Children Who Have Had Convulsions During Infancy**—Thiemich and Birk have traced the later history of 64 children known to have had convulsions in infancy The only similar work which they have found in the literature was Bullard and Townsend's article in 1901, and this does not distinguish between the various kinds of convulsions but lists all that are not true epilepsy By "eclampsia infantum" Thiemich understands epileptiform convulsions of the entire musculature, sometimes occurring in series but lasting only a few minutes each time with loss of consciousness, and, during the intervals, marked signs of "spasmophilia," such as tetany laryngospasm, with the Trous

seau or facial sign, or morbidly increased electric excitability In the 64 cases reported, the onset of the eclampsia always followed metabolic disturbances Only 2 of the children were even partially breast fed Dietetic measures were the main reliance in treatment, supplemented usually by phosphorus cod liver oil In 37 per cent heredity was an unmistakable factor in the convulsions, and in 13 per cent there was neuropathic heredity—a total of 54 per cent of proven heredity No instance of epilepsy was found in the parents or family of any of the children Two thirds of the children were found later to be below the average of intelligence or morals, and some of the others are only children The writers add that the fact of being an only child, as is well known, affords a predisposition for nervous affections An only child sometimes is helped at home with his studies, thus enabling him to be rated as normal at school—to the child's great disadvantage, as he succumbs sooner or later to the mental strain Many an early maturing only child, who ranked high in his early school life, falls far below the average later, if he does not end as a "psychopath" The later development of the children with laryngospasm alone did not differ in any respect from that of the children with pronounced eclampsia Only a very small percentage of the eclamptic infants developed into normal children

68 **Operative Treatment of Diphtherial Stenosis of the Larynx in Infants**—Moltschanow reviews the experience at Moscow with intubation in laryngeal stenosis from diphtheria Out of a total of 193 intubated children, 21 were less than a year old. Ten of the infants recovered

70 **Tuberculosis of the Flat Bones of the Skull.**—Reber reports 24 cases in children None was under a year old, but 12 were between 1 and 2, and 11 between 2 and 10 In 134 cases recorded in the literature, the age is mentioned in 105, and 46 of the patients were between 10 and 20, 37 between 20 and 30, only 9 under the age of 2, while 5 were between 30 and 40, and 5 between 40 and 60 In his own experience with 24 cases, 11 of the patients were clinically cured in a comparatively short time, recent reports from 9 show that the cure was permanent, and also that concurrent tuberculous lesions elsewhere were also permanently cured at the same time In 5 cases large depressions were left in the bones, but in one case regeneration of the bone was complete The mild cases healed without local treatment Others required puncture and injection of iodoform emulsion or scraping and resection far into sound tissue Multiple tuberculous foci were found in all the cases that terminated fatally, and in 61 of the cases on record

71 **Obstipation Due to Kinking of Intestine.**—Pfisterer was able to differentiate and to relieve this condition in a boy of 6 In an infant the presumptive diagnosis was confirmed by the postmortem findings In the other case, the sigmoid flexure must have been unduly long, as whenever the child was allowed to go a day or so without a movement of the bowels, signs of complete occlusion rapidly developed, which yielded, however, to castor oil and copious rectal injections As the intestine straightened out, the child experienced sudden sharp pain, after which the stools passed readily The parents were instructed to supervise the child's intestinal functions and this put an end to further trouble The anatomic conditions in early childhood favor this kinking of the intestine, and any disturbance in the digestive organs is liable to cause trouble from this source The sigmoid flexure in children kinks easily, and the space in the pelvis, especially in boys, is contracted in comparison to the conditions in the adult Rectal examination is important for differentiation, also the fact that large amounts of fluid can be introduced without its flowing out again Fluid passes readily upward, but the valve like closure of the kinked intestine prevents its escape Pfisterer is convinced that a large proportion of the cases published as Hirschsprung's disease were, in reality, merely the result of this kinking of the intestine, generally at the sigmoid flexure, or the result of some primary or secondary anomaly in the mesentery The assumption of a congenital deformity is sustained by the finding of other congenital malformations elsewhere

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72 (XVII Nos 1 2 pp 1 248) *Etiology of Appendicitis R. Kretz
73 *Gas in the Urine (Pneumaturie) C Adrian and A Hamm
74 *Experimental Study of Functions of Kidney Parenchyma Remaining After Extensive Resection (Nierenreduktion und Funktion des restierenden Parenchyms) H von Haberer
75 Pathologic Anatomy of Appendicitis (Wurmfortsatzerkrankungen) P Schrumpf.
76 Case of Unilateral Congenital Defect in the Pectoral Muscle with Absence of Corresponding Mamma (Pectoralisdefekt bei Amastie) F Loening
77 *Diagnosis of Occlusion of Artery in Gangrene of the Foot (Arterienverschluss bei Gangraena pedis) L Moszkowicz
78 Pathology of Circulation in Thyroid Gland. (Schilddrüsenzirkulation) T v Verebely
79 Inflammation of the Cecum and Intestinal Catarrh (Blinddarmentzündung und Darmkatarrh) E Siegel

72 **Tonsils in Etiology of Appendicitis.**—Kretz presents arguments to sustain the assumption that an acute angina may lead to bacteriemia and the bacteriemia to phlegmonous appendicitis During the last 5 years appendicitis was the cause of death in 53 out of the 3,579 autopsies at the Vienna Franz-Josef Hospital In only 14 cases was the autopsy complete, but in each of these there were evidences of recent tonsillitis His experience in the clinic also favors the assumption of a connection between tonsillitis and appendicitis The trouble is almost invariably the work of streptococci From their primary invasion of the tonsils with resulting bacteriemia, may result appendicitis osteomyelitis endocarditis, pleurisy, meningitis or myositis Physicians in general fail to realize the connection between these affections, Kretz remarks, but they belong in a single group not only because they are the work of a certain pyogenic micro organism, but because they are connected epidemiologically by the common link "angina"

73 **Gas in the Urine**—Adrian and Hamm devote this communication to the study of spontaneous gas formation in the bladder exclusively the work of gas producing bacteria Three such cases have been published and they have had 4 similar ones under observation for some time The patients were 4 men and 3 women between 23 and 66 Two of the women were pregnant There was no glycosuria in any instance Cystitis was present in every case In 4 cases the colon bacillus was found in pure cultures, in 3 the *Bacterium lactis aërogenes*, once associated with cocci The prognosis is dubious, especially for elderly persons Experience with 2 of the cases suggests the probability of some serious affection of adjacent organs (cancer), favoring the development of the pneumaturia The production of gas is probably due to bacterial decomposition of the albumin in the cystitic urine Treatment can be only symptomatic, they say, as no efficient measures against bacterial pneumaturia are known

74 **Behavior of Remainder of Kidney After Resection**—Haberer reports experiments on 3 goats and 38 dogs in which resections of the kidneys were made as extensive as possible and at as brief intervals as possible, with implantation of fresh kidney tissue when more of the kidney had been resected than was compatible with life His research is described in detail with illustrations He was surprised to find that no less than 9 of the supposedly healthy dogs presented pathologic changes in the kidneys at the first operation Among other facts learned is that some animals are able to survive two resecting operations on the remaining kidney after nephrectomy, even when all 3 operations are performed within from 25 to 34 days The death rate, however is very high for this series of experiments At the same time they show that it is possible for dogs to survive extirpation of one kidney and reduction of the size of the other kidney to two thirds its size, all within a week or reduction to one half its size by two operations following the nephrectomy within a month The experiments further demonstrate that mild bilateral pathologic changes are liable to retrogress completely in the remaining kidney after a nephrectomy Whether or not resection of the remaining kidney will be tolerated can not be foretold, even with cryoscopy and the phloridzin test The latter proved an excellent index of the functional capacity of the renal parenchyma present Whether general are the in

can affect the findings of the phloridzin test is still undecided. Repetition of the phloridzin test within brief intervals does not seem to influence the findings, but this test never reveals an anatomic lesion until it has induced functional disturbance. It is even possible that causes outside the kidney may entail functional disturbances revealed by the phloridzin test. It was astonishing in the experiments related to note the almost complete absence of even transient general disturbances from removal of one kidney.

77 **Diagnosis and Treatment of Occlusion of Arteries in Gangrene of the Foot**—The application of a tourniquet for 5 minutes with the consecutive active hyperemia as the blood rushes back into the parts has proved a valuable means of determining the conditions of the blood vessels in the region. With sound blood vessels the region becomes red and warm, while with occluded vessels the pallor persists or the skin only slowly returns to normal tint. Moszkowicz's experiments on the cadaver and in the clinic demonstrated that the occlusion of the artery was always localized by the stoppage of the return flow of blood at this point or just above. Further clinical experience is necessary to determine whether amputation can be done at this point or whether it is wiser to leave more space and to amputate a few inches above the point where the active hyperemia is arrested. Another important question yet to be decided is whether or not it might be wiser to take the flap on the side where the hyperemia extends farther downward. He first raises the leg to expel the blood, then applies energetic constriction with an elastic band, as high as possible on the limb, and leaves the tourniquet in place for five minutes. On removal of the band the circulation is rapidly restored throughout the limb, even in case of arteriosclerosis, if the blood vessels are permeable. When the circulation is seen to be sufficient all through the leg except at the toes, expectant treatment is indicated, allowing the toes to drop off as in case of gangrene from freezing, or the whole or part of the foot can be amputated. But if the circulation is seen to be arrested above, the leg should be amputated without delay, above the point where the active hyperemia is arrested. If amputation is refused, by repeat the test the course of the case can be supervised and the development of occlusion from thrombi higher up can be determined. The patients can see for themselves the results of the test, and it much simplifies matters. Even with mere narrowing of the arteries, as in case of intermittent claudication, the active hyperemia test gives very instructive findings. It will differentiate the true cause in many conditions at present erroneously attributed to joint affections, flat foot, varices or hysteria. In conclusion, Moszkowicz suggests that possibly by repetition of this procedure of induced active hyperemia, the lumen of the vessels might become enlarged or the development of collateral circulation be promoted. Other measures to induce active hyperemia, including cupping apparatus, might also be tried although great caution is necessary, especially with superheated air.

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NEW PATENTS

Recent patents of interest to physicians.

844855 Formaldehyd generator. Robert W. Dodge, Kansas City, Mo.
844335 Syringe. Joseph H. Dodson, Chicago.
844715 Evaporator. Andrew A. Dunham, Adams, N. Y.
844860 Purifying pyroligneous acid. James R. Garroway, Glasgow, Scotland.
844449 Inhaler. Maurice Green, New York.
844450 Rectal dilator. Charles R. Harris, Los Angeles.
844798 Surgical appliance. Louis B. Hawley, Rochester, N. Y.
844362 Invalid bed. Samuel C. Kagarice, Sioux Falls, S. D.
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845099 Ophthalmoscope. Emanuel N. Klein, Cincinnati.
845249 Syringe nozzle. Norval T. Morris, Marietta, Ohio.
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847619 Invalid bed. Aiken C. Taylor, Charleston, S. C.

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Original Articles

SOME GENERAL PRINCIPLES IN CONNECTION WITH PROTOZOA AS FACTORS IN DISEASE *

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At the risk of repeating statements already well known, I propose to discuss certain general principles concerning protozoa especially in connection with disease Such a discussion is not entirely free from the risk of laying myself open to attack, but I believe that it is a good plan to return occasionally not only to general principles but also to elementary facts If such a discussion provokes adverse criticism, either in public or in private, the criticism itself may accomplish some good and thus justify this paper

We have heard a great deal during recent years about protozoa in relation to disease, and during the next twenty years we shall hear much more, for, quite aside from studying these animals as a cause of disease, we can, I believe, conservatively hope to find in their study valuable clues to solutions of many obscure problems in cytology of higher animals This phase of protozoology is capable of playing as important a rôle in medicine as the subject of pathogenic protozoa is now playing in pathology and I am fully persuaded that eventual practical results would more than justify the establishment of several university chairs of protozoology, with the distinct understanding that the incumbents should devote a not inconsiderable amount of their time to a purely abstract and academic study, without even permitting the question of the immediate practical application of their conclusions to arise in their minds I believe thoroughly in applied protozoology, but I look for equally important ultimate results in academic protozoology, and I hope that the very just and perfectly natural utilitarian tendencies of our times will not inhibit the obtaining of further fundamental, but at present academic, principles which this group of animals seems to offer

Now if protozoa are of such importance, both academically and practically, as they seem to be, let us ask the question From our present standpoint of knowledge what are protozoa? This question may seem absurdly elementary for we are prone to consider that the conception of such a common word as "protozoa is thoroughly established

For myself I am free to confess that the more I read and study on protozoa the less clearly am I able to form a systematic conception of what really are protozoa and what really are not protozoa I will go even further and lay myself open to attack by making what may seem to physicians to be an unscientific admission, namely that, while in numerous instances I feel capable of reasoning out that certain organisms are or are not protozoa in numerous other cases I feel as much confidence in a conclusion based on my intuition as in a conclusion based on my reasoning Fifteen years ago I would not have wished to make this admission but the more experienced one becomes the less fear he has of admitting his ignorance, the limitations of his ability and above all the important fact that it is very difficult, often impossible, to draw sharp boundaries in Nature

Let us turn for a moment to the systematic conception of the protozoa

Most of us would probably not object very strenuously to defining the protozoa briefly as unicellular animals As a general proposition this definition is more or less acceptable to me, with however, the important mental reservation that zoologists the men who spend their lives studying animals, are unable to give a definite concise uncriticisable definition of an animal and, further, that the term unicellular as applied to the protozoa is not absolutely free from criticism

As a matter of curiosity, I have recently examined a number of standard books to see how various authors attempt to describe the protozoa systematically The study was interesting, but the results could be more or less clearly foreseen

Several prominent authors speak of the protozoa in a way which might leave the unguarded reader under the impression that these organisms represent a distinctly defined group of animals Prominent among the characters attributed to the group are the following

1 A unicellular structure with one or several nuclei

2 If several cells unite to form a colony these cells still preserve their independent nature

3 Tissues and organs are absent in the sense that tissues are structures composed of similar cells similarly united and organs are combinations of tissues for specific functions but a quasi tissue differentiation is more or less admitted for the protozoa and organelle are distinctly admitted

4 The usually microscopic size with numerous exceptions

5 Simplicity of structure the word simplicity being more or less qualified

6 Non sexual reproduction by division budding and spore formation and often sexual reproduction

7 Habitat in water or in a moist medium

It is no secret to zoologists that these characters singly or in combination are not sufficient to enable us to determine definitely in all cases whether a given organism is or is not a protozoon and we should recall that when authors speak of the protozoa in the manner indicated they are doing so with more or less poetic license in order not to plunge the reader into uncertainty and confusion

* Introductory address in a Symposium held before Section K, American Association for the Advancement of Science New York, Dec. 27 1906.

Turning from the class of works just referred to, and consulting the more philosophical and less didactic essays, the fact stands out very prominently that certain authors (Cobbold,[1] 1879, Doflein,[2] 1903, Leuckart,[3] 1879, Ward,[4] 1894) frankly admit their utter inability to give a concise and definite systematic definition of protozoa while many other authors avoid the question by omitting a definition and confining their remarks to a general discussion

There is nothing new or startling in what has just been said These facts are known to every professional zoologist and to many physicians But I have a distinct object in bringing this matter to your attention to-day, namely In our numerous discussions as to whether the causative agent of this or that disease is an animal or a plant parasite, let us recall that zoologists may have a legitimate difference of opinion on certain cases, because of the fact that in the present state of zoological knowledge cases may come to our attention in connection with which it is impossible for us to eliminate completely the subjective element and to give an absolutely objective opinion If now conditions are such that professional zoologists may hold different opinions on a given case, without any implication that we are unreasonable or in our dotage, is it strange that physicians and pathologists, to whom zoology is a side issue, should differ in their interpretations?

To my mind, the natural conclusion is that two men may differ in opinion as to whether *Treponema, Plasmodiophora, Cercomonas, Lamblia,* etc, are animals or plants, and yet they do not thereby forfeit all rights to retain their systematic position as members of the species *Homo sapiens* Let us expect in the future to meet wide differences of opinion in such cases, and let us accept these differences as having a certain amount of fundamental right to existence

Admitting, now, the inability of zoology to concisely define the *Protozoa,* let us glance for a moment at certain conclusions which authors have reached regarding systematic limits of certain groups of *Protozoa.*

Several years ago zoology had a satisfactory classification for the *Protozoa* We recognized the *Ciliata,* the *Flagellata* the *Sporozoa,* the *Rhizopoda,* etc To-day the limits and relations of these groups are by no means so distinct as formerly supposed Some eminent botanists claim the flagellates, and two of the most prominent zoologists were, until they died a few years ago, firm believers in the view that the zoologists had as much right to the bacteria as did the botanists In view of the recent results in the flagellates and sporozoa, showing that in neither group is the organization so simple as was formerly supposed, the limits of these two groups —once assumed to be so sharply defined—are now more or less confused and I doubt whether even Calkins, whom I view not only as one of our leading living American authorities on protozoa, but also as one of the foremost protozoologists America has ever produced, would care to go under oath as to whether certain forms are flagellates or sporozoa

The second point which I wish to make, therefore, is that for some years to come we must expect to meet with a considerable legitimate difference of opinion among authors as to the exact systematic position of certain organisms, even when it may be generally admitted that they are protozoal rather than protophytic.

In what do these confusing conditions find their natural explanation? To my mind, the explanation is, to no little extent, historical Up to a few years ago, or, at most, a few decades ago, the protozoa were very interesting little creatures which a zoologist felt justified in studying provided he had nothing better on hand, or provided he became especially interested in them academically and was fortunate enough to be in a position to study them Under these circumstances, it is not strange that the classification used to-day is not altogether satisfactory Then the technic improved, and our friends, the pathologists, began to discover zoological principles which the zoologists had overlooked, and now zoologists are being forced to a more careful study of the protozoa Let us not forget that we owe the impetus for this study chiefly to medical men like Lœsch, Laveran, Theobald Smith, MacCallum, Councilman and others Had these men never pointed out the practical importance of the protozoa, it seems an open question whether zoology could now boast of a Thelohan, a Mesnil, a Nuttall, a Schaudinn or a Grassi as eminent students of protozoa This statement is made, of course, without any reflection on the greatness of Balbiani, Buetschli, Stein, Schneider and other recognized protozoologists who have studied the subject chiefly from more academic points of view

Again, in studying any animal, the biology of which is not known to us, we naturally and very properly try to foresee theoretically what the life history probably will be In this we reason on analogy Such reasoning is thoroughly justified and is frequently confirmed by practical study In this speculative forecast, our reasoning is based chiefly on known facts and known principles rather than on facts and principles as yet unrecognized Further, terms are used with the conceptions attached to them at the time the forecast is made These theoretical forecasts are subject, however, to two important modifications as time goes on, namely First, to a change in the conception of systematic units, due to additional knowledge of taxonomic nature, and, second, to additional facts of a more strictly biologic character

To take a specific example Calkins has published a speculative life cycle for the alleged parasite of smallpox There are certain points in his speculative cycle which have support in analogy, hence they are easily grasped, other points seem to be rather contrary to analogy The fact, however, that you or I may have our misgivings as to whether the alleged parasite of smallpox may not possibly be the product of a parasite rather than the parasite itself, and the fact that certain points advanced are difficult for us to grasp should not blind us to the possibility that, after all, the real fundamental difference between those who support the theory of a smallpox parasite, and those of us who have our misgivings regarding it, may perhaps simply be that the former are from 5 to 25 years ahead of us in taxonomic and biologic conceptions By no means has the last word been said on the possible protozoan etiology of smallpox The existence of a difference of opinion at present, however is not unjustified, on the contrary, it is fortunate for this very difference of opinion is bound to be one of the most important factors in bringing out the truth, further, it has its basis in truth, namely, in the fact that our present knowledge of the protozoa is so incomplete that such differences are inevitable

1 Cobbold Parasites A Treatise on the Entozoa of Man and Animals 1879 p 7

2 Doflein F and Prowazek S von Die pathogenen Protozoën (mit Ausnahme der Hämosporidien) Handb d. path Mikro-organismen Jena 1903 vol I pp 867-1006 figs 1-81

3 Leuckart Die Parasiten des Menschen 1879

4 Ward, Henry B Protozoa Wood's Ref Handbook of Medicine and Science, August, 1904 vol. viii pp 527 549

Considering now the *Protozoa* as an ill-defined group of unicellular animal or animal-like organisms, and admitting the present complexity and confusion of the subject, let us turn to certain general rules in reference to their relation to certain diseases

In May, 1901, in harmony with the trend of the thought of that year, I formulated two general rules with reference to parasites and disease My original formulation was as follows

> We may lay down two general biologic rules, which, I believe, are enunciated to night for the first time The first rule, to which at present a few exceptions are known, is that diseases which are accidentally spread by insects are caused by parasitic plants, particularly by bacteria The second, to which no exceptions are as yet known, is that those diseases which are dependent on insects or other arthropods for their dissemination and transmission are caused by parasitic animals, particularly by sporozoa and worms

The difference between the accidental (or, better, the facultative) carrier and the obligatory carrier may be well brought out if we call the first method of dissemination a mechanical transmission and the second method a biologic transmission The first does not assume or imply that the transmitted germ necessarily undergoes any evolutionary stages in the arthropod (as, for instance, in the case of the bacillus of typhoid, or the egg of an ascaris or of a tenia in or on the housefly) while the second does imply that the intermediate host is necessary for the normal completion of the life cycle of the organism in question (as, for instance, the mosquito for the malaria parasite, or certain insects for certain tapeworms, nematodes and thorn-headed worms)

Novy and Knapp,[5] in their superb paper on *Spirillum obermeieri*, state that

> Hitherto it has been assumed that insect transmission indicates a protozoal organism, and in so far as the spirochetes are concerned, the chief evidence which can be now adduced in support of their animal nature is the fact of such transmission in the case of *Spirillum duttoni* and *Spirillum gallinarum* The persistence of the spirochetes in such insects for months, and the infection of their eggs constitute the remaining argument in support of this view

This passage has produced, in the minds of several persons with whom I have discussed it, the impression that the biologic rules just quoted have been overthrown

I would point out, however, that the hereditary transmission of a germ, by the female through the egg to her young can not be accepted as an argument for the protozoan nature of a given organism, for unless certain published (1904) observations are shown to be erroneously interpreted, plant parasites can be transmitted in this manner

Further, it should be noticed that Novy and Knapp immediately add (contrary to the conclusions of Dutton and Todd,[6] 1905)

> There is as yet absolutely no evidence that the spirochetes (i e, spirilla from their point of view) actually multiply in these insects, much less any indication of the existence of a life cycle in any way comparable to that of the malarial organism

This last sentence is of great importance, for until it is shown that *Spirillum duttoni* and *Spirillum gallinarum* do undergo some necessary biologic changes in ticks it remains undemonstrated that the diseases caused by these germs are dependent biologically on ticks, and, if not dependent on ticks for their transmission, then the ticks are mechanical, not biologic, transmitters

Certain forms of trypanosomiasis, for the sake of argument, may be admitted as commonly transmitted by certain insects, in certain forms of trypanosomiasis (as surra) it is not only theoretically conceivable, but the point is even claimed by some authors that birds can carry the disease, it is also perfectly reasonable theoretically, and this point appears to be well supported by published facts, that surra can be transmitted through wounds obtained in eating surra animals, it seems also theoretically possible that surra, like dourine, might be transmitted accidentally by coitus All these possibilities go to show that surra is not yet proved to be biologically dependent on insects for its transmission, and this disease, though caused by an organism which is usually recognized as a protozoon, can not therefore, be legitimately cited as disproving the biologic rules quoted The possibilities of transmitting malaria by birds, by ingestion, and by coitus, is unknown and undreamed of, so far as we know or can reason, the life cycle of the malarial organism, hence also the existence of the disease in nature, like the life cycle of infection with *Dipylidium caninum, Filaria bancrofti, Gigantorhynchus gigas*, etc, are absolutely dependent on insects, hence malaria comes within the second biologic rule

Are African tick fever and Rocky Mountain spotted fever of man and spirillosis of chickens valid exceptions to the second rule?

At present we can hardly argue conclusively on Rocky Mountain spotted fever in this respect, but it is to be hoped that the brilliant results obtained by Ricketts[7] and by King this past year will be continued next year and give us further definite facts as to whether the transmission by ticks in that case is mechanical or biologic, and it is also to be hoped that they may be able to succeed, where I failed, in definitely finding a culpable parasite

As for African tick fever of man and American spirillosis of chickens, I am more than impressed with the brilliant work by Novy and Knapp, in which they argue that the parasites are plants rather than animals At the same time, as they themselves emphasize no necessary biologic stages of these parasites have been found in the ticks, hence I must submit that the possibility is as yet by no means excluded that these two diseases are not depndent on the ticks for their transmission Who can say to-day that these diseases may not, like surra, be wound diseases, namely, transmissible through a wound made by almost any method which would at the same time contaminate the wound with infected blood? I am not yet, therefore in a position to admit that an exception has been proved to the second biologic rule, and much less am I in a position to admit that the rule has been overthrown I would not of course go to the extreme of claiming that no exceptions will ever be known, for our conceptions of animals and plants may change and our knowledge of the protophytes is not yet complete I do maintain however that the second rule holds to day as well as it did in 1901 for no exception has yet been proved

In connection with the interesting experiments of Dutton and Todd[6] it is pertinent to call attention to the fact that while they have definitely proved certain points other points brought out although indicative of certain interpretations call for further study under [illegible]

[5] Novy and Knapp Studies on *Spirillum obermeieri* and Related Organisms Jour Infect Diseases May 1906 vol III pp 291 393

[6] Dutton and Todd The Nature of Human Tick Fever Liverpool School of Tropical Medicine, Memoir 17 1905 pp 91 [illegible]

[7] Ricketts THE JOURNAL A M A Jul [illegible] 4 1906 p [illegible] S Oct [illegible]

complicating conditions than those which they describe

On analyzing their experiments, it seems to me that they have established the following points

1 In tick fever a certain blood parasite is found which they interpret as probably identical with *Spirochæta obermeieri* [But which has since been described by Novy and Knapp[6] as a distinct form, *Spirillum duttoni*]

2 This parasite and this disease can be transmitted by inoculating blood from diseased animals into susceptible healthy animals

3 This parasite and the disease can be transmitted to healthy susceptible animals by allowing the latter to be bitten by ticks collected from native houses, but not fed experimentally on diseased animals, accordingly, in Nature ticks can transmit the disease

4 Ticks caught in native houses (but apparently not tested for infectivity), when fed on sick animals which had been experimentally inoculated with infected blood, were able six days later to transmit the disease to healthy susceptible animals

[In this case it is not proved whether the infectivity of the tick dated from their feeding on the sick animal or whether they were infective when first caught, hence, a definite period of incubation in the tick can not be assumed from this experiment]

5 Five days after animals have been inoculated by tick bite the parasites may be found in the blood

6 Infectious ticks, collected in native houses, may remain infectious for at least 29 days after being collected

7 An experiment to transmit the disease through unbroken skin, by placing on it blood containing parasites, was negative

8 Dust and dirt from cages containing infected ticks did not transmit the disease through the abraded skin (Observations covered 14 days Experiments with blood on the abraded skin do not appear to have been made)

9 So far as can be judged from the data published, tick fever can be hereditary in the tick from mother to young [This does not however, necessarily imply either a biologic cycle of the parasite or its animal nature]

The following points seem to me to be indicated, but not proved yet, further study and experiments in these lines are necessary

1 That tick fever can be acquired as a "wound disease," namely, by bringing infective blood into contact with abraded skin (Dutton's[1] infection)

2 That an infectious tick is not necessarily infectious at all times (If infective only at intervals, this point would seem to support the contention that the parasite is protophytic rather than protozoal)

Whatever any later experiments may show, and without prejudice to such results, the following points do not seem to me to have been established as yet

1 That there is any minimum period of incubation in a tick experimentally inoculated before this tick is able to transmit the disease

2 That there is any necessary portion of a definite life cycle dependent on a passage of the parasite through the tick, hence this disease has not been demonstrated as biologically dependent on the tick.

Finally, it may be remarked

1 The maximum period of incubation in mammals is not yet established, hence great conservatism must govern the interpretation of certain of the experiments

2. The maximum period of infectivity of ticks is not yet established.

3 No experiments seem to have been made to determine whether or not infection may take place through food soiled by feces from infected animals

Summarizing, without prejudice to results any later experiments may show, the point is not yet established that tick fever, though transmissible by ticks, is biologically dependent on ticks for its transmission

In connection with the spirillosis of chickens, Marchoux and Salimbeni[8] have shown that this disease can be transmitted by ticks (*Argas miniatus*), but they have also shown that it is transmissible through ingestion of fresh feces, for their experiment animal No 8, which was fed on fresh dejecta of a sick fowl, took the disease in 5 days This latter experiment goes to show that the parasite in question (*Spirillum gallinarum*) is not dependent biologically on *Argas miniatus* for its life cycle, hence that it does not form an exception to the second rule under consideration

In regard to a possible necessary period of incubation in the tick, the only reference I have been able to find is a statement by Marchoux and Simond[9] that

Argas miniatus, intermediate host of the spirillum of fowls, infects itself, like *Stegomyia fasciata*, by biting a sick individual *Argas miniatus* (like the stegomyia) does not manifest infectious power until after a lapse of a definite time

The premises of this conclusion are unknown to me, hence I can not judge it fairly, but nowhere in the literature have I as yet been able to find experiments which support it Whatever the premises may be, the fact remains that, according to published experiments, the disease is also transmissible through the feces

Turning now to yellow fever In May, 1901, shortly after Reed, Carroll, and Agramonte published their epoch-making experiments, I said in the address from which I quoted above

The fact that yellow fever is transmitted by the bite of the mosquito not until a considerable time—namely, 12 days after the insect has sucked blood—indicates very strongly that yellow fever is caused, not by a bacterium, but by a sporozoön (I was, of course, using the term sporozoön in its 1901 conception) If this latter supposition can be demonstrated, then the conclusion will from analogy, be warranted that mosquitoes, and probably only mosquitoes, can transmit this disease If, on the other hand, the disease should be proved to be bacterial in nature, analogy would not at present (in 1901) warrant us in concluding that mosquitoes are either necessary to its transmission or that they are the only transmitters

In 1904 Schaudinn suggested that possibly the parasite of yellow fever would eventually prove to be a spirochete Arguing on his premises regarding the life cycle of spirochetes, this suggestion seemed to be a valuable one, but Novy's work appears to me to have weakened it somewhat

Later Novy and Knapp[5] state

Transmission of spirillar diseases by insects, and the congenital infection of mammals and eggs of insects are properties which up to the present have been regarded as characteristic of protozoa These properties are now known for the first time to be shared by this group of bacteria. Yellow fever presents a marked analogy to the spirillar infections and it is not improbable that the cause of this disease will be found to belong to this group of organisms

Again (on pages 302-303) they say

The fact alluded to above finds a remarkable parallel in the causative agent of yellow fever, which likewise disappears from the blood in about two days It goes to show that this unknown organism may be related to the spirochetes (namely, *Spirilla*, from their point of view), and as such, may belong not to the protozoa, as is generally accepted, but to the bacteria

Every suggestion and every analogy which can possibly be brought forward in connection with yellow fever is to be welcomed, and the suggestions just quoted are, therefore more than justified At the same time it may be pointed out that this suggestion, which, of course,

8 Marchoux and Salimbeni La spirillose des poules Ann de l Inst. Pasteur September 1903 vol xvii pp 569 580

9 Marchoux and Simond Etudes sur la fièvre jaune. Ann l Inst Pasteur January 1906 vol xx pp 16-40

may prove to be correct, is somewhat contraindicated by certain facts namely, by the long period of incubation in the mosquito

Let us speculate on the life cycle of the parasite of yellow fever so far as reasonable biologic analogy would seem to justify us at present

Note, first of all, that the incubation of the disease in man is very short when compared with its incubation in the mosquito, hence this fact seems to call for a parasite with very rapid reproduction Note, further, that the non-sexual reproduction, both of bacteria and of protozoa, is potentially in geometrical progression; hence the assumption, or at least the consideration, of this non-sexual reproduction during the incubation of the disease in man seems justified. Assume, for instance, that each separate organism introduced by the mosquito gives rise to 100, to 1,000, or to 10,000 organisms within a few hours, follow this up in geometrical progression Would not such a hypothetical case be in harmony with the short incubation in man? Note, however, the important fact that in the hypothesis, up to this point, either bacteria or protozoa could present the required conditions The fact that the organisms in question disappear early from the blood does not seem to me to be a very strong point either for or against either the bacterial or the protozoan nature of the parasite

Passing now to the mosquito, note, first of all, the relatively long period of incubation, of about 12 days This must have some significance

Let us first assume, for the sake of argument, that yellow fever is caused by a spirillum, namely, from the standpoint of Novy and Knapp, by one of the bacteria When a mosquito bites a yellow-fever patient in the early stage of the disease she drinks in these bacteria with the blood, according to present conceptions, this blood first passes to the diverticula of the esophagus and later to the stomach the point is clear that the diverticula have become infected with the yellow fever parasite The probabilities that all the bacteria would leave the diverticula with the blood and pass to the stomach, leaving the diverticula yellow fever sterile, seem very, very, remote, on the contrary the probabilities seem very great that some of these bacteria would remain in the diverticula

The most recent conception of the process of biting on the part of mosquitoes is that after piercing the skin with their mouth parts they eject the contents of the diverticula into the wound This conception seems to be based on rather good experimental evidence interpreted by a good observer (Schaudinn) If this conception is correct, it would appear reasonable to suppose that if the mosquito bites a non-immune at any time from 2 to 11 days after she has become infected from a yellow fever patient she would vomit some of the yellow fever bacteria from her esophageal diverticula into the person bitten and that this person would contract yellow fever This conclusion is not however, in harmony with the 12-day period of incubation in the mosquito and would appear to indicate an error in the assumption that the parasite is a bacterium

If however, it is assumed that the parasite of yellow fever undergoes part of its life cycle in the mosquito the changes in question would naturally begin very shortly after the organisms gained access to the mosquito and under such supposition they would probably not result in yellow fever even if vomited from the esophageal diverticula into a non-immune because their life cycle in the mosquito has not been completed.

Novy and Knapp[5] have insisted that we have as yet absolutely no evidence that *Spirillum duttoni* and *Spirillum gallinarum* do undergo any necessary cycle or even a multiplication in ticks, and at least the first part of this claim seems well founded Have we not, on the other hand, a certain amount of indirect evidence in the 12-day incubation period that the yellow fever parasite does undergo part of its normal life cycle in the mosquito?

Since we have at present no analogy of such obligatory alternate cycles among the bacteria, and since we have good analogies for such cycles among the protozoa, does not this obligatory period of incubation seem, in our present state of knowledge, and, of course, without prejudice to any unknown cycles in bacteria to indicate that the parasite in question is of protozoal rather than of protophytic nature?

So far as our present knowledge of unicellular organisms goes I believe that to-day as in 1901, the indications are that yellow fever is caused by a protozoon, but I am in doubt as to its exact systematic position, namely, whether it is a sporozoon or a flagellate If, however, double life cycles can be proved for any of the bacteria, then the present data regarding yellow fever will be equally applicable to the view that the disease is caused by some sort of a bacterium

What now, is the meaning of the double life cycle, the alternation of sexual and non-sexual reproduction?

Years ago academic protozoology showed that in certain protozoa the non-sexual reproduction is limited in extent and is rapid, while the sexual reproduction may be still more limited in extent and is slower in comparison

Just why this limitation exists, whether the non-sexual reproduction is brought to an end because of the animals' becoming exhausted, from a reproductory standpoint (perhaps an internal cause), or because of unfavorable surroundings (an external cause), or from a combination of both, can not be discussed here, fundamental as the question is Suffice it to say that the non-sexual reproduction in many unicellular animals is limited in extent It is fortunate for us that this is so, for were it not every untreated case of malaria would necessarily be fatal, since the organisms in man increase (potentially) in geometrical progression Note the important point however that in malaria, caused by a parasitic protozoön this non-sexual reproduction is rapid while it lasts but that it is limited in extent by some factors not altogether clear at present

The exact causes of this limitation of non-sexual reproduction among the protozoa calls for extensive academic study, but the results of such study will be of far-reaching practical importance

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CHRONIC GASTRITIS *

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Probably no term employed in the nomenclature of gastric diseases has been more misused than that of chronic gastritis The disease has been and still is considered by some physicians a very common affection yet Riegel says "Chronic catarrh of the stomach is not a frequent disease If we cease to force all

* Read in part at a meeting of the N[illegible] Massachusetts Medical Society

disorders into a few disease categories, and rely only on positive signs of this condition, we shall soon learn that chronic gastritis is not so frequent as older physicians thought and as many modern ones still persist in believing" Stockton[1] says that "the comparative infrequency of chronic gastritis will be endorsed by experience if the cases are carefully studied" In my experience, primary chronic gastritis is encountered once in about every 300-400 adult patients in a general medical clinic, not so often as gastric cancer or gastric ulcer Of 100 consecutive cases of gastric disorders, taken from my private records in which the stomach contents were examined, 9 presented the objective findings of chronic gastritis This percentage (9 per cent) of gastritis cases is greater than I had expected to find, but it should be stated that more than one-half of the number from which these were taken were cases referred by physicians and represent unusually severe types of gastric affections

With the general practitioner the percentage of such cases is probably somewhat larger than is met in a clinic, for the reason that he does not see so many patients with trivial ills Yet, however we approach the subject, it will be found that the percentage of cases of primary chronic gastritis is comparatively small

DEFINITION OF CHRONIC GASTRITIS

Because the above statements will seem surprising, perhaps incredible to some, let us come to an understanding of what is meant by chronic gastritis, and how the condition may be recognized Briefly, then, chronic gastritis means a chronic inflammation of the gastric mucosa, an organic affection characterized by certain pathologic changes This condition produces certain alterations in the gastric secretion, usually a diminution of the acidity, with more or less impairment of the ferments pepsin and rennin, and there is usually an excessive secretion of mucus The degree of alteration of the secretion depends on the extent and severity of the inflammatory process Now, by certain well-known tests we are enabled to detect the changes occurring in the secretions, and it is on these objective findings that we base our d agnosis It was the custom in the past to base the diagnosis of this condition on the subjective symptoms of the patients This older method has frequently resulted in the diagnosis of chronic gastritis in cases which have been proved to be cancer, ulcer, neuroses and other gastric conditions

Herein lies the explanation for the prevalence of the different opinions regarding the occurrence of this disease The original purpose of this paper was to consider the occurrence and etiology of gastritis, but since so little has been written on this subject, as compared to other features of digestive diseases, a further discussion of the disease may not be out of place, and the 9 cases referred to will help to present some points I desire to make

DURATION

In chronic gastritis the duration of the condition is known to be considerable The average duration in the 9 cases exceeded six years, the shortest being over one year and the longest over twenty years from the beginning of symptoms

SEX AND AGE

The disease is more common in men than in women These cases reported occurred in patients between the ages of 20 and 50 years. Ewald[2] considers that a large number of patients who are said to die of old age, really perish from gastric atrophy, but states that this is not generally recognized, since the symptoms are as yet not well known and because the microscopic changes in the stomach are not marked Of the few elderly patients in whom I have suspected this condition, I have usually been surprised to find no evidence of it

ETIOLOGY

So many factors enter into the etiology of the disease that it is often difficult or impossible to attribute the condition to any single cause The use of alcohol is considered by many as the most common cause, and it seems probable that this agent, by its direct action either on the gastric mucosa, or the liver and other organs, may cause primary, or secondary chronic gastritis The majority of my patients with gastritis have not used alcoholic liquors to excess, and many have not used them at all

WEIGHT

It is the popular opinion that patients with gastritis are usually emaciated or show considerable loss of weight Strumpell[3] speaks of it, and Ewald says "Emaciation soon occurs, and losses of from 30 to 60 pounds may often occur in a few weeks" On the other hand, Einhorn[4] states that "although there are exceptions to this rule, the general appearance is good, the patient looks well nourished and usually possesses a good panniculus adiposus"

Of the 9 cases cited (with an average duration exceeding six years) three patients had lost less than 5 pounds, and but one more than 10 pounds, my general experience coincides with Einhorn's

OTHER SYMPTOMS

Appetite—This is generally considered as diminished, although most writers mention exceptions to the rule I find that only one patient complained of poor appetite, four considered their appetites good, and four that their appetites varied from excessive to voracious With good appetites and fairly good vicarious digestion by the intestines there is but little reason for much loss of weight

Pain—In only 2 of the 9 cases was pain complained of In 1 of these cases it occurred from one to two hours after eating and was relieved by eating again This case has been referred to in another article,[5] and is one of several of this kind which I have observed Boas[6] refers to this peculiar type of pain in chronic gastritis, and remarks that "it has exactly the same character as the pain in hyperchlorhydria," with which statement I quite agree Pain as a rule, however, is the exception

Bowels—Constipation occurred in 4 cases, while in 5 the bowels were regular Constipation is considered the rule Distress or discomfort (not pain) after meals occurred in 5 cases This I find is a fairly common symptom Excessive flatulence occurred in 3 cases, and was usually an annoying and obstinate symptom to overcome Eructation of gas, with or without regurgitation, also occurred in 3 cases, as did also nausea and vomiting, which was soon relieved by treatment

Thus it is seen that no one symptom, nor any particular group of symptoms is characteristic of gastritis,

1 Diseases of the Stomach 1903 Nothnagel's Ency of Practical Medicine.

2. Ewald Diseases of the Stomach Amer Edition.
3 Textbook of Medicine.
4 Einhorn Diseases of the Stomach.
5 Chase Boston Med and Surg. Jour Sept. 14, 1905
6 Therap d. Gegenwart, Berlin, xlvi No 1.

moreover, any symptom, or almost any group of symptoms, here mentioned may result from a neurosis, or an organic disease other than gastritis It should be borne in mind that purely nervous symptoms may occur in cases of gastritis

DIAGNOSIS

The diagnosis must be based on the objective findings obtained from examination of the gastric contents, yet it is rarely safe to make a positive diagnosis from a single examination I shall not enter into the details of diagnosis, they may be found in any recent work on diseases of the stomach

In these 9 cases, free HCl was absent on repeated examinations, and combined HCl was, as a rule, diminished, with a corresponding reduction in total acidity Mucus was present in excessive amounts in 7 of the 9 cases Except in 3 cases of slight stasis, the amount of contents one hour after an Ewald test breakfast was always diminished, and in the majority of patients no contents could be obtained at the expiration of this period "Acid gastritis" and secondary gastritis are not considered here

Differential Diagnosis—Nervous achlorhydria, some cases of cancer of the stomach and achylia gastrica are the conditions with which gastritis is most often confused when considering the gastric contents. Cases of transient achlorhydria are easily distinguished by observation, as the secretion soon returns in full strength, whereas the return of the secretion in chronic gastritis is always gradual and rarely or never appears in normal amount Cancer is soon distinguished after observation by the continued loss of weight and the certain downward progress of the patient. The chemical findings of achylia gastrica can not be distinguished from those of atrophic gastritis, from which condition the achylia may and usually does result, although we occasionally see a case, one of which I have briefly reported,[7] in which it is difficult to conceive of a pre-existing gastritis, since there are no symptoms

COMPLICATIONS

A slight degree of stasis or motor insufficiency was observed in 3 of these 9 cases, it was soon overcome by treatment I believe that marked degrees of stasis or atony rarely occur in uncomplicated cases of gastritis

Hypermotility or pyloric insufficiency occurred in six of the patients, as indicated by the absence of gastric contents one hour after an Ewald test breakfast In so far as I know, it has never been positively determined whether this premature expulsion of contents results from hypermotility, or from an insufficient pylorus A factor to be considered in this condition is the fact that the diminished secretion naturally causes a diminution in the amount of contents Whatever the condition may result from I have found it a difficult or impossible one to overcome, although in some cases in which the secretion has been restored, more gastric contents have been obtainable at later periods after the test meal than at the beginning of treatment Some observers look on this condition merely as a compensatory one whereby the chyme is hurried into the intestines where the greater part of digestion occurs If viewed in this light it is not a condition to be overcome

PROGNOSIS

Riegel says "Mild degrees of gastritis may be cured and frequently are cured If severe degrees of atony have developed the prognosis is less favorable" According to Ewald, "the prognosis of this disease should not be considered too slightingly, especially as in prolonged cases of atrophy, an incurable and fatal lesion may be developed Even in apparently cured cases the organ is left in such a sensitive condition that the slightest irritation or deviation from a specified diet may cause a fresh attack"

I believe that practically all patients with gastritis may be relieved of their subjective symptoms Even in cases of achylia with gastric atrophy such results are often obtained, and these patients are seen to follow their occupations, to eat almost any kind of food with little or no discomfort, and to maintain their standard weight In a large percentage of the simple and mucous forms of gastritis, the subjective symptoms are not only overcome, but the free HCl (which may have been absent for months or years judging from the duration of the symptoms) may be restored, at least in part Such results may certainly be considered as cures

It would seem that relapses are liable to occur in this disease, yet I have encountered only an occasional case, and in each, gross indiscretion in diet or the excessive use of liquor seemed the probable cause During treatment most patients learn a valuable lesson in dietetics and profit thereby For this reason I feel that they may be less liable to a recurrence than many individuals, who daily abuse their stomachs, are to the disease The nine patients cited were treated from one month to several months In every case the subjective symptoms were relieved or entirely overcome within a few weeks

In 6 of the 9 cases free HCl was restored in amounts from 2-5 of one part per 1,000 or 02-05 of 1 per cent The return of the HCl was always a gradual process at first merely a trace appeared and later amounts sufficient to titrate The earliest return of HCl in any case was after eleven days' treatment, while the longest time required for its appearance was seven months of irregular treatment The average time of total treatment was about three months

The results of treatment in those cases in which HCl was not restored seemed quite as satisfactory as in those in which it returned, in so far as relief from symptoms was concerned At the time of discharge all these patients were partaking of a plain, wholesome diet During the period of from twelve to nineteen months since their discharge, six of these patients have reported no recurrence of symptoms and in 5 of the cases in which the HCl was restored it is still present Three cases have not been followed

It may be argued that these cases were unusually mild ones (the average duration was six years), yet I consider them fairly representative of the class of gastritis cases usually encountered The question may arise, how long after the disappearance of subjective symptoms is one justified in treating a case in an attempt to restore the secretion? It may be said generally that the stronger or the richer the secretion the greater the possibility of restoring it to normal

The strength of a secretion is best ascertained by the result of the quantitative test of its rennin or rennin zymogen Boas[8] and Bourveret[9] have determined that normally rennin zymogen after the addition of calcium chlorid will coagulate milk with a dilution of 1 part secretion to from 150 to 160 parts water Hence the

7 Philadelphia Med Jour., June 14 1902.

8 Deutsch Med. Woch chr., N

9 Gaz. Méd. de Paris No

greater the dilution of a secretion, and a positive result from this test, the stronger it is. The above-mentioned writers have further decided that "a secretion which will not coagulate milk, after a 1-25 dilution, indicates a condition of advanced atrophy, in which there is but little probability that the gastric secretion can be restored." Usually the free HCl returns, if at all, within a few weeks.

One of the objects of treatment is to restore the secretion as nearly as possible to its normal strength, consequently so long as examinations from time to time show an increase in the amount of HCl, treatment should be continued. I have found, however, that after the free HCl has reached the strength of about 0.5 of 1 part per 1,000, or .05 of 1 per cent., continued treatment fails to effect a further increase. I have never seen or heard this point discussed, therefore I do not know if mine has been a common experience with others.

TREATMENT

The object of treatment is to overcome the inflammation and if possible to restore the secretion and the impaired motor power of the stomach. Since any single cause of the inflammation is rarely discoverable, we must remove all conditions which may be considered as contributing factors. Hence, good hygiene is advised, which means regular habits as to eating, exercise and action of the bowels, repair of carious teeth, etc.

Diet.—In this condition starches are better digested in the stomach than under normal conditions, while proteids are but poorly cared for here, being digested almost entirely in the intestines. Bearing this point in mind and remembering that all mechanical, chemical and thermal irritants are to be avoided, we have the key to dietetics in this disease.

The articles of food to be allowed I check from a printed diet list, usually advising three meals a day, with one or two lunches if desired. Of the more restricted diet in the beginning of treatment, patients will rarely eat too much, while if the scales show a maintenance or increase of weight I feel that they are eating enough, regardless of the number of calories which the food represents. Cooked fats I have found are not usually well borne. No alcoholic liquors are allowed, my reasons for prohibiting them are given elsewhere.[10]

Mechanical Means.—To free the stomach of mucus and to stimulate secretion and peristalsis, douching of the stomach internally with a warm alkaline and saline solution, is, I believe, the most valuable means we possess. For this purpose I employ my stomach apparatus,[11] using the Rosenheim tube. The solution is injected with the amount of force desired, but it is always greater than that obtained by ordinary lavage. By the douche I believe that adherent mucus is more thoroughly removed than by simple lavage, while the stimulating action of the small forceful streams must be far greater than that produced by pouring water into a tube which has but one or two large eyes. In fact, I feel that douching of the stomach in gastritis and other conditions will become a more popular means of treatment when its technic and results are better known.

Riegel agrees that "the internal douche may frequently be employed with profit in chronic gastritis. It may be useful under certain conditions to force the fluid into the stomach under pressure." Douching or lavage should be done at least twice a week and always with the fasting stomach. The agents which I usually employ are sodium chlorid and sodium bicarbonate 30 grains of each to a pint of water at 100 F. "Washing out" the stomach with copious draughts of medicated water seems but a poor substitute for douching.

Drugs.—For the purpose of dissolving mucus and increasing the secretion I use from 10 to 15 grains each of sodium chlorid and sodium bicarbonate in a glass of warm water, to be taken about fifteen minutes before meals. Some of the saline mineral waters may serve the same purpose in a measure, so also may some of the more elegant preparations containing the various salts. The phosphate or sulphate of sodium may be used, especially if there is constipation, nux vomica, condurango and other bitter tonics may be of service, but of late I have rarely used them.

I have elsewhere expressed my views regarding the use of hydrochloric acid[12] and pepsin.[13] I believe that the large doses of from 15 to 20 minims of HCl fail to accomplish the desired object, moreover, I feel that they may do harm. Small doses of from 5 to 10 minims may in some ways prove beneficial, but I consider that there is no evidence to show that they stimulate the secretion of HCl.

Vacations and out-of-door exercise or occupation are important and at times seemingly necessary factors in the cure of gastritis.

419 Boylston Street

10. Philadelphia Med. Jour., June 6, 1903.
11. An Improved Stomach Tube: THE JOUR. A. M. A., July 28, 1906.
12. Clinical and Laboratory Study of the Therapeutic Value of HCl in Diseases of the Stomach: Boston Med. and Surg. Jour., Sept. 14, 1905.
13. Therapeutic Value of Some Digestive Preparations: Boston Med. and Surg. Jour., May 18, 1905.

A GRAPHIC METHOD IN PRACTICAL DIETETICS

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NEW HAVEN, CONN.

Professor Mendel, in an address on dietetics before an audience of Boston physicians, asked the very pertinent question: "Why do physicians take so much care in measuring their dosages of drugs, which are administered only occasionally, and so little care in measuring their food prescriptions, which are to be followed daily?" In prescribing drugs, a physician would be regarded as criminally negligent if he simply told his patients to take "a little" strychnia, but to be sure "not to take too much," or to take a "big dose" of calomel. Yet in prescribing diet, physicians often give just such advice.

Doubtless in the scheme of Nature man was not expected to measure his food. He was provided with healthy, normal instincts instead. But, as often happens in diseased conditions, the food instinct has sometimes become perverted and can not be trusted. The consumptive requires, or at any rate is believed by most physicians to require, more food than his appetite calls for, and the victim of kidney diseases less. To re-establish the instinctive guides to food selection should doubtless be the ultimate aim of the physician, but, to that end, a quantitative determination of the food actually used, and a quantitative regulation thereof, may be advantageously employed. As yet, however, neither the quantity of food nor the proportions of its constituents have been often prescribed with precision.

What Dr Burton-Fanning says of prescribing food for the consumptive applies to food prescriptions in general, that the whole art of such prescriptions is summed up in the word accuracy[1] Until recently accuracy was impossible But to-day by the aid of elaborate tables of food values constructed by Atwater and Bryant in America and of mineral salts by Koenig in Germany and if great accuracy is required of coëfficients of digestibility it has become possible to make a true measurement of diet prescriptions

As to mineral salts we know at least in which foods they are severally to be found For instance if a patient needs iron he may instead of taking the preparations of the druggist have added to his list of foods one or more of the following lentils asparagus, lettuce peas figs strawberries, spinach, beans, potatoes prunes or apples, the order of which is that of the amount of iron contained in proportion to total food value

Again, if calcium is needed instead of limewater there may be administered milk figs cabbage or lentils If sulphur is needed, the patient may be given potatoes peas, beans asparagus or cabbage, if phosphorus beans, peas, rice, milk, if silicon, lettuce cabbage strawberries rice potatoes barley or cucumbers if magnesium peas beans cocoanuts, barley and rice, if chlorin, cocoanuts milk lentils, asparagus cabbage, if sodium lentils figs asparagus if potassium beans, lentils peas, cocoanuts, potatoes Or if simply mineral salts in general are required, they are found in large quantities in proportion to food value among lentils peas beans cocoanuts potatoes, milk rice figs, apples, barley cabbage and chestnuts

There are data also which describe the amount and kinds of acids in foods their peptogenic qualities, their effects on peristalsis, etc

THE BASIS OF COMPUTATION

But the ordinary problems of dietetics are concerned not so much with these minor constituents and properties of foods as with the amount and proportions of proteids fats and carbohydrates

Two methods have hitherto been used for computing proportions of proteids, fats and carbohydrates One consists in using the tables of percentages by weight of proteids, fats and carbohydrates, the other, Dr J H. Kellogg's, in using a table which gives the number of calories in the form of proteids, fats and carbohydrates per ounce of each kind of food These may be described respectively, as the method of weight per cent. and the method of calories per ounce The method here suggested is different from either, and may be called the method of calories per cent It takes as its starting point not a unit of weight but a unit of food value called a "standard portion" of each kind of food. A "standard portion" is defined as that amount of food which contains 100 calories. A table is constructed which gives the weight in a "standard portion" of each particular kind of food, and out of the 100 calories contained therein the number of calories in the form of proteids, fats and carbohydrates The three methods were discussed and the last named explained in detail in another paper[2] We shall, therefore, pass over this part of our subject very briefly in the present paper and devote our main attention to the practical application

In order to carry out this method foods should be served at the table in 'standard portions' or simple multiples thereof The amount of milk served instead of being a whole number of ounces should be (for average milk) 4 9 ounces—the amount that contains 100 calories This "standard portion constitutes about two-thirds of an ordinary glass of milk Of the 100 calories which it contains 19 will be in the form of proteid 52 in fat and 29 in carbohydrates In other words of the food value of milk 19 per cent is proteid 52 per cent fat and 29 per cent carbohydrates

One advantage of this method is apparent at once It enables us to make a true comparison between different foods as to the relative amounts of proteid fat and carbohydrate The other methods are misleading in this regard For instance though it is well recognized that milk is a higher proteid food than pecan nuts, yet if we compare milk and pecans on the basis of the method of "weight per cent" we shall find that the pecans appear three times as rich in proteid milk containing 3 3 per cent and pecans 11 per cent But if we compare them on the basis of "calories per cent" we find that while milk contains 19 calories of proteid out of each 100 of total calories pecans contain only 6 milk showing three times as much proteid as pecans The paradox that pecans are higher in proteid per ounce but lower in proteid per 100 calories is due to the fact that pecans are a much more concentrated food than milk whereas 100 calories of milk weigh 4 9 ounces 100 calories of pecans weigh only half an ounce The weight of a "standard portion" of any food i e of that amount which contains 100 calories is a measure of the degree of concentration The most concentrated of all foods is probably olive oil which contains 100 calories in a little over one-third of an ounce (38 oz) Watermelon represents a food at the opposite extreme of which over 1½ pounds are required to yield the 100 calories In order that the 'calories per cent' method may be easily put in practice it is necessary to have a table giving the weight constituting a "standard portion" (i e the amount yielding 100 calories) and the calories of proteid fat and carbohydrate in this portion At the close of the present article such a table is given, computed chiefly from the tables of Atwater and Bryant and for made dishes from those of Dr Kellogg The chief advantage of this method of expressing food values is that it lends itself readily to graphic representation The difficulty in the practical use of m values is that they can not be visualized

THE GRAPHIC METHOD

Different foods contain the three food teids fats and carbohydrates, in different The tripartite constitution of any particula resented in the present method by the posit in the triangle[3] CPF (Fig 1) The method the point on the triangle is analogous to that o a city on a map by latitude and longitude, the of proteid[4] in the food is represented like latitu the height of the point above the base line CF (the height CP, being taken as 100 per cent) The perc age of fat is represented, like longitude, by the dista

1 For a statement of the great divergences of sanatoria from this ideal see "Statistics of Diet in Consumptive Sanatoria," Fisher Tran Second Annual Meeting Nat. Assoc. for Study and Prevention of Tuberculosis, New York, 1907 also in Am. Jour of the Med. Sci., October 1906

2 Fisher "A New Method for Indicating Food Values" Amer Jour of Physiol., April 1 1906.

3 For convenience the triangle is drawn with one angle a right angle and the two sides about it equal

4 I employ the term proteid although in the tables the figures represent "protein" (i e., 6¼ times nitrogen), the usual makeshift for proteid.

greater the dilution of a secretion, and a positive result from this test, the stronger it is The above-mentioned writers have further decided that "a secretion which will not coagulate milk, after a 1-25 dilution, indicates a condition of advanced atrophy, in which there is but little probability that the gastric secretion can be restored" Usually the free HCl returns, if at all, within a few weeks

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10 Philadelphia Med. Jour June 6 1903

11 An Improved Stomach Tube, The Jour A. M A. July 28 1906

12 Clinical and Laboratory Study of the Therapeutic Value of HCl in Diseases of the Stomach Boston Med and Surg Jour Sept. 14 1905

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A GRAPHIC METHOD IN PRACTICAL DIETETICS

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Professor Mendel, in an address on dietetics before an audience of Boston physicians, asked the very pertinent question "Why do physicians take so much care in measuring their dosages of drugs, which are administered only occasionally, and so little care in measuring their food prescriptions, which are to be followed daily?" In prescribing drugs, a physician would be regarded as criminally negligent if he simply told his patients to take "a little" strychnia, but to be sure "not to take too much," or to take a "big dose" of calomel Yet in prescribing diet, physicians often give just such advice

Doubtless in the scheme of Nature man was not expected to measure his food He was provided with healthy, normal instincts instead But, as often happens in diseased conditions, the food instinct has sometimes become perverted and can not be trusted The consumptive requires, or at any rate is believed by most physicians to require, more food than his appetite calls for, and the victim of kidney diseases less To re-establish the instinctive guides to food selection should doubtless be the ultimate aim of the physician, but, to that end, a quantitative determination of the food actually used, and a quantitative regulation thereof, may be advantageously employed As yet, however, neither the quantity of food nor the proportions of its constituents have been often prescribed with precision

What Dr Burton-Fanning says of prescribing food for the consumptive applies to food prescriptions in general, that the whole art of such prescriptions is summed up in the word accuracy[1] Until recently accuracy was impossible But to-day, by the aid of elaborate tables of food values constructed by Atwater and Bryant in America, and of mineral salts by Koenig in Germany, and if great accuracy is required, of coefficients of digestibility, it has become possible to make a true measurement of diet prescriptions

As to mineral salts we know at least in which foods they are severally to be found For instance, if a patient needs iron, he may, instead of taking the preparations of the druggist have added to his list of foods one or more of the following lentils, asparagus, lettuce, peas, figs, strawberries, spinach, beans, potatoes, prunes or apples, the order of which is that of the amount of iron contained in proportion to total food value

Again, if calcium is needed, instead of limewater there may be administered milk, figs cabbage or lentils If sulphur is needed, the patient may be given potatoes peas, beans, asparagus or cabbage, if phosphorus, beans, peas, rice, milk, if silicon, lettuce, cabbage, strawberries rice, potatoes, barley or cucumbers if magnesium, peas beans, cocoanuts, barley and rice, if chlorin, cocoanuts, milk, lentils, asparagus, cabbage, if sodium, lentils figs, asparagus, if potassium beans, lentils, peas, cocoanuts, potatoes Or if simply mineral salts in general are required, they are found in large quantities in proportion to food value, among lentils, peas, beans cocoanuts, potatoes, milk, rice, figs, apples, barley, cabbage and chestnuts

There are data also which describe the amount and kinds of acids in foods their peptogenic qualities, their effects on peristalsis, etc

THE BASIS OF COMPUTATION

But the ordinary problems of dietetics are concerned not so much with these minor constituents and properties of foods as with the amount and proportions of proteids, fats and carbohydrates

Two methods have hitherto been used for computing proportions of proteids, fats and carbohydrates One consists in using the tables of percentages by weight of proteids, fats and carbohydrates, the other, Dr J H Kellogg's, in using a table which gives the number of calories in the form of proteids, fats and carbohydrates per ounce of each kind of food These may be described respectively, as the method of weight per cent and the method of calories per ounce The method here suggested is different from either, and may be called the method of calories per cent It takes as its starting point not a unit of weight but a unit of food value called a "standard portion" of each kind of food A "standard portion" is defined as that amount of food which contains 100 calories A table is constructed which gives the weight in a "standard portion" of each particular kind of food, and out of the 100 calories contained therein the number of calories in the form of proteids, fats and carbohydrates The three methods were discussed and the last named explained in detail in another paper[2] We shall, therefore, pass over this part of our subject very briefly in the present paper and devote our main attention to the practical application

In order to carry out this method foods should be served at the table in "standard portions" or simple multiples thereof The amount of milk served instead of being a whole number of ounces, should be (for average milk) 4 9 ounces—the amount that contains 100 calories This "standard portion" constitutes about two-thirds of an ordinary glass of milk Of the 100 calories which it contains, 19 will be in the form of proteid 52 in fat, and 29 in carbohydrates In other words of the food value of milk 19 per cent is proteid 52 per cent fat, and 29 per cent carbohydrates

One advantage of this method is apparent at once It enables us to make a true comparison between different foods as to the relative amounts of proteid fat and carbohydrate The other methods are misleading in this regard For instance, though it is well recognized that milk is a higher proteid food than pecan nuts, yet if we compare milk and pecans on the basis of the method of "weight per cent" we shall find that the pecans appear three times as rich in proteid milk containing 3 3 per cent and pecans 11 per cent But if we compare them on the basis of "calories per cent," we find that while milk contains 19 calories of proteid out of each 100 of total calories, pecans contain only 6 milk showing three times as much proteid as pecans The paradox that pecans are higher in proteid per ounce but lower in proteid per 100 calories is due to the fact that pecans are a much more concentrated food than milk, whereas 100 calories of milk weigh 4 9 ounces 100 calories of pecans weigh only half an ounce The weight of a "standard portion" of any food i e of that amount which contains 100 calories is a measure of the degree of concentration The most concentrated of all foods is probably olive oil which contains 100 calories in a little over one-third of an ounce (38 oz) Watermelon represents a food at the opposite extreme of which over 1½ pounds are required to yield the 100 calories In order that the "calories per cent" method may be easily put in practice it is necessary to have a table giving the weight constituting a "standard portion" (i e the amount yielding 100 calories) and the calories of proteid fat and carbohydrate in this portion At the close of the present article such a table is given computed chiefly from the tables of Atwater and Bryant and for made dishes from those of Dr Kellogg The chief advantage of this method of expressing food values is that it lends itself readily to graphic representation The difficulty in the practical use of most tables of food values is that they can not be visualized

THE GRAPHIC METHOD

Different foods contain the three food elements proteids fats and carbohydrates in different proportions The tripartite constitution of any particular food is represented in the present method by the position of a point in the triangle[3] CPF (Fig 1) The method of locating the point on the triangle is analogous to that of locating a city on a map by latitude and longitude the per cent of proteid[4] in the food is represented like latitude by the height of the point above the base line CF (the total height CP being taken as 100 per cent) The percentage of fat is represented, like longitude by the distance

1 For a statement of the great divergences of sanatoria from this ideal see Statistics of Diet in Consumptive Sanatoria" Fisher Tran Second Annual Meeting Nat Assoc. for Study and Prevention of Tuberculosis New York 1907 also in Am Jour of the Med Sci., October 1906

2. Fisher A New Method for Indicating Food Values." Amer Jour of Physiol April 1 1906

3 For convenience the triangle is drawn with one angle (a right angle and the two sides about it equal

4 I employ the term proteid although in the tables the figures represent protein (i e. 6¼ times nitrogen) the usual in lieu for proteid.

of the point horizontally from the vertical line CP (the total horizontal breadth, CF, being taken as 100 per cent) Thus, the point O, representing milk, is located at a height above CF ("latitude") 19 per cent of the total height of the triangle, which signifies that 19 per cent of the food value of milk is proteid, and at a distance to the right of CP ("longitude") 52 per cent of the total breadth of the triangle, which signifies that 52 per cent of the food value of milk is fat. Foods high in proteid will be represented by points high up in the triangle White of egg, of which the food value is all proteid, will be represented at the point P, representing 100 per cent P is, therefore, called the "proteid corner" of the triangle Foods rich in fats, as nuts, cream, butter are represented by points far to the right Pure fats like olive oil are located at F at the extreme right, representing 100 per cent of fat F is, therefore, called the "fat corner"

The point representing a food is completely located by means of the percentage of proteid and fat, no attention need be paid to the carbohydrate If, however, it is desired to find the carbohydrate, its percentage is readily determined being what is left of 100 calories not already accounted for by proteid and fat Thus a "standard portion" of cottage cheese, being 76 per cent proteid and 8 per cent fat, will have left 16 per cent of carbohydrate If one desires a graphic representation,

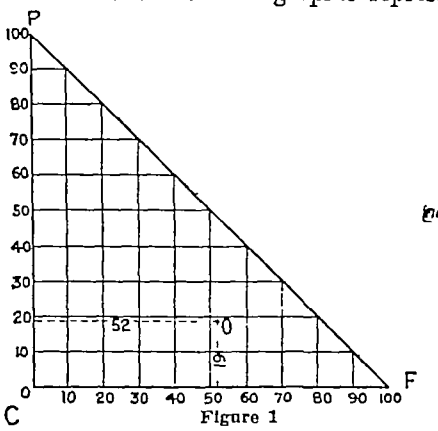

Figure 1

it is found in the distance of the point O from the third side of the triangle, FP (the total distance of this side from the opposite corner being taken as 100 per cent) Foods like bread, cereals and fruits, which are mostly carbohydrate, will thus be represented by points far away from the side FP Foods such as sugar, of which the food value is wholly carbohydrate, will be represented at the remotest point C, representing 100 per cent carbohydrate, which is, therefore, called the "carbohydrate corner"

Any food is thus represented on the "food map" by a point the relative distances of which from the three sides of the triangle represent the proteid, fat and carbohydrate[5] On this food map, fatty foods are represented by points near the fat corner, F, starchy and saccharine foods by points near the carbohydrate corner, C and proteid foods by points near the proteid corner, P A food devoid of proteid is evidently located on the base line C, a food devoid of fat, on the side CP, and a food devoid of carbohydrate on FP The chief classes are represented in the accompanying diagrams, flesh foods and cereals being shown in Figure 2, nuts and fruits in Figure 3, vegetables in Figure 4, puddings, pies, pastries and sweets in Figure 5, dairy products, eggs and meat substitutes in Figure 6, and soups, salads and relishes in Figure 7 In each case, the position of the point relatively to the sides of the triangle represents the proportions of the proteids, fats and carbohydrates, and the number opposite each name represents the weight (in ounces) of a "standard portion"

This method of representing food values reveals some striking facts—for instance, the great variations in the proportion of proteid in different vegetables Vegetables

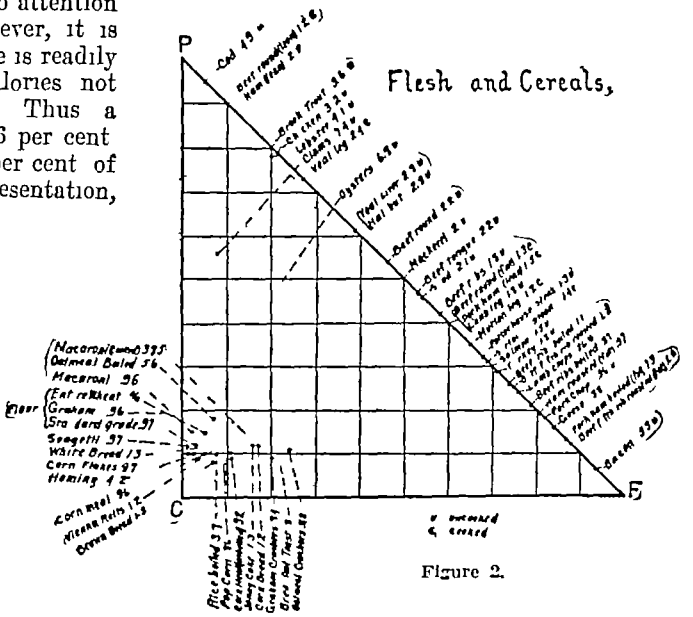

Figure 2.

are commonly supposed to be low in proteid This is true of some vegetables, such as beets, artichokes and sweet potatoes, but others are high in proteid, such as asparagus, cabbage, cauliflower, celery, cucumbers, eggplant, radishes, spinach, squash, and tomatoes[6] Among fruits also we find some instances of moderately high proteid, such as strawberries and blackberries, oranges and watermelon These foods are as high in proteid, in proportion to total food value, as most nuts and cereals On the other hand, dried fruits, which are sometimes mentioned as containing a higher percentage of proteid than other fruits, are as a matter of fact often much lower Thus, dates contain but 2 per cent., prunes and raisins 3 per cent, figs 5 per cent

It is evident that in most cases foods of the same class show a family resemblance Meats and other flesh foods, with the exception of shellfish, are represented by points on FP, being devoid of carbohydrates Cereals are represented by points near the carbohydrate corner,

5 It has been shown elsewhere (Amer Jour of Physiol April 1906 pp 422 4) that this method of visualizing the composition of any food carries another method with it. If from the point O (Fig 1) the position of which in the triangle indicates the food composition (of milk for instance) we draw straight lines to the three corners of the triangle thus resolving the triangle into three constituent triangles It may be shown that if we call the total area of the triangle 100 to represent a standard portion (100 calories) of the food then the three partial triangles will exactly represent the constituents for proteid, fat and carbohydrate The triangle representing proteid is COF i e the triangle whose altitude to O represents proteid in the first method. Similarly COP represents fat and POF carbohydrate For the graphic representation of particular foods by this method of triangles see the article already cited In the present article only the method of lines or as we may call it, the latitude and longitude" method will be employed.

6 It should be stated however that all estimates of proteid are strictly speaking protein i e 6¼ times the contained nitrogen In some cases proteid and protein are not identical but the former is less than the latter owing to the fact that some of the nitrogen is not in proteid but in a waste or useless form This is true of almost all the proteid of meat soups which have therefore practically no food value except a peptogenic one As to vegetables, in default of exact data, no correction from protein to proteid is here attempted.

C, nuts, with the exception of chestnuts, are located near the fat corner, F, fruits, with the exception of olives, near the carbohydrate corner, C, vegetables show a large range within the triangle. In Figure 8 the range of each of these classes is approximately shown

The foods eaten at a meal may thus be indicated by points on the "food map" Opposite each point should be written the amount eaten, measured in "standard portions" This array of points presents a picture of what foods and how much of each have been eaten, and shows at a glance their characteristics But to use this properly we need to combine these points into one point,

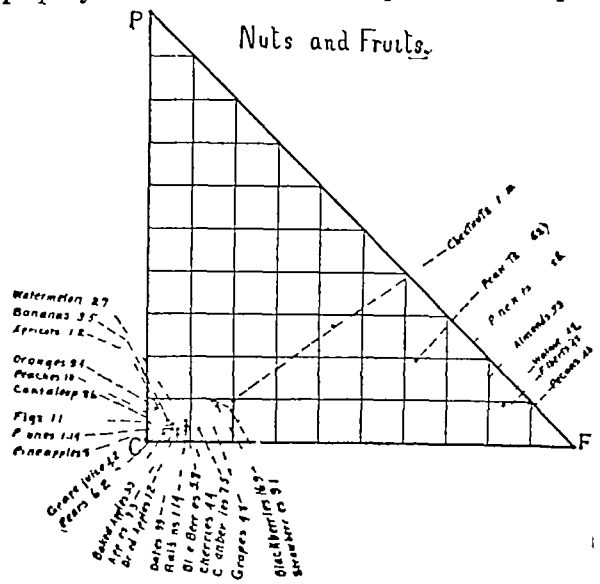

Figure 3.

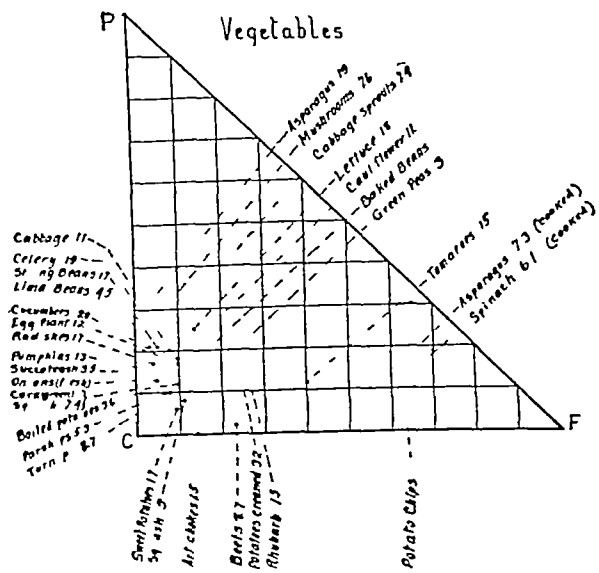

Figure 4

their center of gravity which represents the entire meal This may be done in various ways

DEMONSTRATING COMBINATIONS

The combination of two foods equal in calories is represented by a point midway between them Thus to combine one "portion" of bread and one "portion" of butter (Fig 9) draw a straight line between their points and at the middle of it mark a cross and label it "2 this point will represent two "portions' of bread and butter

If the calories of the two foods are unequal, the point representing the combination will be proportionately nearer the point with the larger number Thus if one portion of bread is combined with one-half portion of butter, the bread-and-butter point will not be midway between the points for bread and for butter, but will lie twice as near the bread point as the butter point Its approximate position may be found with great rapidity by the eye without making exact measurements

When three foods are combined, the point representing the combination is, in like manner, the "center of gravity" of the three, and may be found by first obtain-

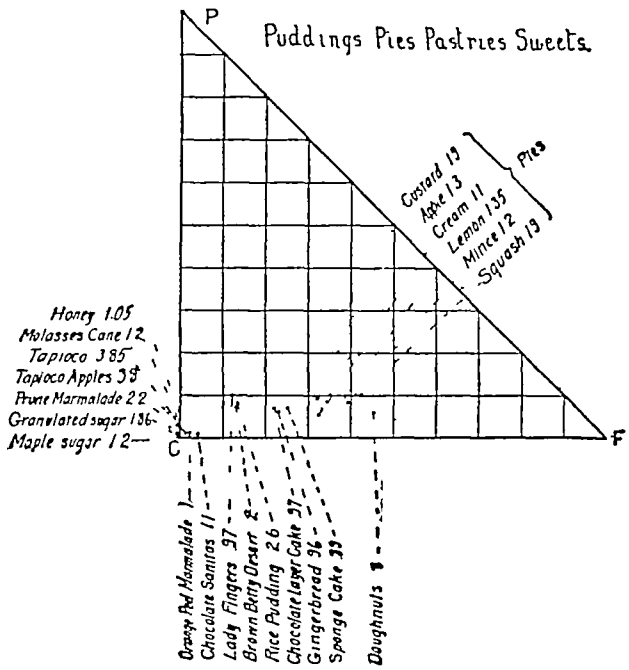

Figure 5

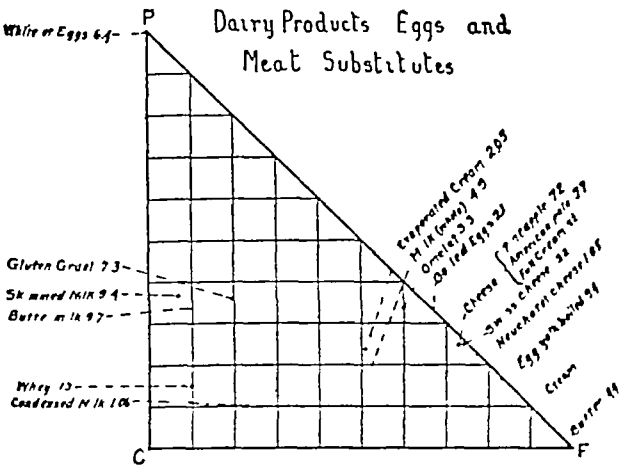

Figure 6

ing the center of gravity of two and then obtaining the center of gravity of the point thus obtained, and the third Thus if as in Figure 10 we have three points representing respectively 3, 4 and 5 calories of three separate foods shown by the attached number 3, 4 and 5, the point representing the combination may be found by joining the points labelled 3 and [illegible] their center of gravity 7 situated [illegible] than point 3 and dividing the lin[illegible] ratio of 3 to 4 The first t[illegible]o poi[illegible]

TABLE OF FOODS GIVING THE WEIGHT (IN GRAMS, OUNCES AND ROUGH MEASURE) OF A "STANDARD PORTION" OF EACH FOOD AND THE NUMBER OF CALORIES IN THAT PORTION" IN THE FORM OF PROTEID, FAT AND CARBOHYDRATE

Name of Food.	'Portion' Containing 100 Calories Roughly Described	Wt of 100 Calories		Per cent. of		
		Grams	Oz	Proteid.	Fat.	Carbohydrate
COOKED MEATS						
†Beef round boiled (fat) 1099¶	Small serving	30	1 3	40	60	00
†Beef round boiled (lean) 1200¶	Large serving	62	2 2	90	10	00
†Beef, round boiled (med.) 1188¶	Small serving	44	1 6	60	40	00
†Beef 5th right rib roasted 1138¶	Half serving	18 5	65	12	88	00
†Beef 5th right rib roasted 1610¶	Small serving	32	1 2	25	75	00
†Beef 5th right rib, roasted 1615¶	Very small serving	25	88	18	82	00
†Beef ribs boiled 1169¶	Small serving	30	1 1	27	73	00
†Beef ribs boiled 1170¶	Very small serving	25	87	21	79	00
*Calves foot jelly as purchased		112	4	19	00	81
*Chicken as purchased canned	One thin slice	27	96	23	77	00
*Lamb chops boiled edible portion average	One small chop	27	96	24	76	00
*Lamb leg, roast	Ordinary serving	50	1 8	40	60	00
†Mutton leg, boiled 1184¶	Large serving	34	1 2	35	65	00
†Pork ham, boiled (fat) 1174¶	Small serving	20 5	73	14	86	00
†Pork ham boiled 1192¶	Ordinary serving	32 5	1 1	28	72	00
†Pork ham roasted (fat) 1484¶	Small serving	27	96	19	81	00
†Pork ham roasted (lean) 1511¶	Small serving	34	1 2	33	67	00
*Turkey as pur canned	Small serving	28	99	23	77	00
†Veal leg boiled 1182¶	Large serving	67 5	2 4	73	27	00
UNCOOKED MEATS						
*Beef loin edible portion average (lean)	Ordinary serving	50	1 8	40	60	00
*Beef loin edible portion average (fat)	Small serving	30	1 1	22	78	00
*Beef loin porterhouse steak edible por av	Small steak	36	1 3	32	68	00
*Beef loin sirloin steak edible portion av	Small steak	40	1 4	31	69	00
*Beef ribs lean edible portion average	Ordinary serving	52	1 8	42	58	00
*Beef round lean edible portion average	Ordinary serving	63	2 2	54	46	00
*Beef tongue edible portion average	Ordinary serving	62	2 2	47	53	00
*Beef juice		395	14	78	22	00
*Chicken (broilers) edible portion average	Large serving	90	3 2	79	21	00
*Clams round in shell edible portion average	Twelve to sixteen	210	7 4	56	8	36
*Cod whole edible portion	Two servings	138	4 9	95	5	00
*Goose (young) edible portion average	Half serving	25	88	16	84	00
*Halibut steaks or sec. edible portion average	Ordinary serving	81	2 8	61	39	00
*Liver (veal) as purchased average	Two small servings	79	2 8	61	39	00
*Lobsters whole edible portion average	Two servings	117	4 1	78	20	2
*Mackerel (Spanish) whole edible portion av	Ordinary serving	57	2	50	50	00
*Mutton leg hind lean edible portion average	Ordinary serving	50	1 8	41	59	00
*Oysters in shell edible portion average	One dozen	193	6 8	49	22	29
*Pork loin chops edible portion average	Very small serving	27	97	18	82	00
*Pork ham smoked lean edible portion av	Small serving	36	1 3	29	71	00
*Pork bacon smoked med fat edible por av	Small serving	15	53	6	94	00
*Salmon (California) ant. sec. ed por av	Small serving	42	1 5	30	70	00
Shad whole edible portion average	Ordinary serving	60	2 1	46	54	00
*Trout brook, whole edible portion average	Two small servings	100	3 6	80	20	00
*Turkey edible portion average	Two small servings	33	1 2	29	71	00
VEGETABLES						
*Artichokes, as purchased average canned		430	15	14	0	86
*Asparagus, as purchased average canned		540	19	33	5	62
*Asparagus as purchased average cooked		206	7 19	18	63	19
*Beans baked canned	Small side dish	75	2 66	21	18	61
*Beans Lima canned	Large side dish	126	4 44	21	4	75
*Beans, string cooked	Five servings	480	16 66	15	48	37

Name of Food.	Portion" Containing 100 Calories Roughly Described	Wt of 100 Calories		Per cent. of		
		Grams	Oz	Proteid.	Fat.	Carbohydrate
FRUITS (FRESH OR COOKED)						
*Apples as purchased	Two apples	206	7 3	3	7	90
Apples, baked	"	94	3 3	2	5	93
Apples sauce	Ordinary serving	111	3 9	2	5	93
*Apricots edible portion average		168	5 92	8	0	92
Apricots cooked	Large serving	131	4 61	6	0	94
*Bananas yellow edible portion average	One large	100	3 5	5	5	90
*Blackberries as purchased average		170	5 9	9	16	75
Blueberries		128	4 6	3	8	89
*Blueberries canned as purchased		165	5 8	4	9	87
Cantaloupe	Half ord serving	243	8 6	6	0	94
*Cherries edible portion average		124	4 4	5	10	85
*Cranberries as purchased average		210	7 5	3	12	85
*Grapes as purchased average		136	4 8	5	15	80
Grape fruit		215	7 57	7	4	89
Grape juice	Small glass	120	4 2	0	0	100
Gooseberries		261	9 2	5	0	95
*Lemons		215	7 57	9	14	77
Lemon juice		246	8 77	0	0	100
Nectarines		147	5 18	4	0	96
Olives ripe	About seven olives	37	1 31	2	91	7
*Oranges as purchased average	One very large	270	9 4	6	3	91
Oranges, juice	Large glass	188	6 62	0	0	100
*Peaches as purchased average	Three ordinary	290	10	7	2	91
Peaches sauce	Ordinary serving	136	4 78	4	2	94
Peaches juice	Ordinary glass	136	4 80	0	0	100
*Pears	One large pear	173	5 40	4	7	89
Pears sauce		113	3 98	3	4	93
*Pineapples edible portion average		226	8	4	6	90
Raspberries black		146	5 18	10	14	76
Raspberries red		178	6 29	8	0	92
*Strawberries as purchased average	Two servings	260	9 1	10	15	75
*Watermelon as purchased average		760	27	6	6	88
CAKES PASTRY PUDDING AND DESSERTS						
*Cake chocolate layer as purchased	Half ord square piece	28	98	7	22	71
*Cake gingerbread as purchased	Half ord square piece	27	96	6	23	71
*Cake sponge as purchased	Small piece	25	89	7	25	68
Custard caramel		71	2 51	19	10	71
Custard milk	Ordinary cup	122	4 29	26	56	18
Custard tapioca	Two thirds ordinary	99 5	2 45	9	12	79
*Doughnuts as purchased	Half a doughnut	23	8	6	45	49
*Lady fingers as purchased		27	95	10	12	78
*Macaroons as purchased		23	82	6	33	61
*Pie apple as purchased	One-third ord piece	38	1 3	5	32	63
*Pie cream as purchased	One fourth "	30	1 1	5	32	63
*Pie, custard as purchased	One-third " "	55	1 9	9	32	59
*Pie lemon as purchased	One third	38	1 35	6	36	58
*Pie mince as purchased	One fourth " "	35	1 2	8	38	54
*Pie squash as purchased	One-third " "	55	1 9	10	42	48
Pudding apple sago		81	3 02	6	3	91
Pudding brown betty	Half ord serving	56 6	2	7	12	81
Pudding cream rice	Very small serving	75	2 65	8	13	79
Pudding Indian meal	Half ord serving	56 6	2	12	25	63
Pudding apple tapioca	Small serving	79	2 8	1	1	98
Tapioca cooked	Ordinary serving	108	3 85	1	1	98

*Beets, edible portion cooked	Three servings	245	8.7	2	23	75
*Cabbage, edible portion		310	11	20	8	72
*Carrots, edible portion average fresh		215	7 6	10	8	82
Carrots cooked	Two servings	164	5 81	10	34	56
*Cauliflower as purchased average		312	11	23	15	62
*Celery edible portion, average		540	19	24	5	71
Corn sweet cooked	One side dish	99	3 5	13	10	77
*Cucumbers edible portion, average		565	20	18	10	72
*Egg plant, edible portion average		350	12	17	10	73
Lentils cooked		89	3 15	27	1	72
*Lettuce edible portion average		505	18	25	14	61
*Mushrooms as purchased average		215	7 6	31	8	61
*Onions fresh edible portion average		200	7 1	13	5	82
*Onions cooked	Two large servings	240	8 4	12	40	48
*Parsnips, edible portion average	1½ serving	152	5 3	10	7	83
Parsnips cooked		163	5 84	10	34	56
*Peas green canned	Two servings	178	6 3	25	3	72
*Peas green cooked	One serving	85	3	23	27	50
Potatoes baked	One good sized	86	3 05	11	1	88
*Potatoes boiled	One large sized	102	3 62	11	1	88
*Potatoes mashed (creamed)	One serving	89	3 14	10	25	65
Potatoes steamed	One serving	101	3 57	11	1	88
*Potatoes, chips	One-half serving	17	6	4	63	33
*Potatoes sweet cooked	Half of av potato	49	1 7	6	9	85
*Pumpkins edible portion average		380	13	15	4	81
Radishes as purchased		480	17	18	3	79
Rhubarb edible portion average		430	15	10	27	63
*Spinach cooked as purchased	Two ord servings	174	6 1	15	66	19
*Squash edible portion average		210	7 4	12	10	78
*Succotash canned as purchased average	Ordinary serving	100	3 5	15	9	76
*Tomatoes fresh as purchased average	Four av tomatoes	430	15	15	16	69
Tomatoes canned		431	15 2	21	7	72
*Turnips edible portion average	Two large servings	246	8 7	13	4	83
Vegetable oysters		273	9 62	10	51	39

DAIRY PRODUCTS

*Butter as purchased	Ordinary pat or ball	125	44	5	99 5	00
*Buttermilk as purchased	1½ glass	275	9 7	34	12	54
Cheese American pale as purchased	1½ cubic in	22	77	25	73	2
*Cheese cottage as purchased	4 cubic in	89	3 12	76	8	16
*Cheese full cream as purchased	1½ cubic in	23	82	25	73	2
*Cheese Neufchatel as purchased	1½ cubic in	29 5	1 05	22	76	2
*Cheese Swiss as purchased	1½ cubic in	23	8	25	74	1
*Cheese pineapple as purchased	1½ cubic in	20	72	25	73	2
*Cream	½ ordinary glass	49	1 7	5	86	9
Koumyss		188	6 7	21	37	42
*Milk condensed sweetened as purchased		30	1 06	10	23	67
*Milk condensed unsweetened (evap cream) as purchased		59	2 05	24	50	26
*Milk skimmed as purchased	1½ glass	255	9 1	37	7	56
*Milk whole as purchased	Small glass	140	4 9	19	52	29
*Whey as purchased	Two glasses	360	13	15	10	75

FRUITS (DRIED)

Dates as purchased average		34	1 2	3	7	90
Figs as purchased average		35	1 24	7	3	90
*Edible portion average	Three large	28	99	2	7	91
*Prunes as purchased		31	1 1	2	7	91
*Edible portion average	One large	31	1 1	5	0	95
*Edible portion average	Three large	32	1 14	3	0	97
*Raisins as purchased		38	1 35	3	0	97
*Raisins edible portion average		28	1	3	9	88
Dates as purchased		11	1 1	3	9	88

Experiments on Losses in Cooking Meats (1900 07) Grindley U S Department of Agriculture No 141

Laboratory number of specimen as per Experiments on Losses in Cooking Meat

* Chemical Composition of American Food Materials, Atwater and Bryant, U S. Department of Agriculture Bull. No. 28

SWEETS AND PICKLES

*Catsup, tomato as purchased average		170	6	10	3	87
*Honey as purchased	Four teaspoonfuls	30	1 05	1	0	99
*Marmalade (orange peel)		28 3	1	5	2 5	97
*Molasses cane		35	1 2	5	0	99 5
*Olives green edible portion	Seven olives	32	1 1	1	84	15
*Olives ripe edible portion	Seven olives	38	1 3	2	91	7
*Pickles mixed as purchased		415	14 6	18	15	67
*Sugar granulated	Three teaspoonfuls or 1½ lumps	24	86	0	0	100
*Sugar maple	Four teaspoonfuls	29	1 03	0	0	100
*Syrup maple	Four teaspoonfuls	35	1 2	0	0	100

NUTS

*Almonds, edible portion average	About eight	15	53	13	77	10
*Beechnuts		14 8	52	13	79	8
*Brazil nuts edible portion	Three ord size	14	49	10	86	4
*Butternuts		14	50	16	82	2
*Cocoanuts		16	57	4	77	19
*Chestnuts, fresh, edible portion average		40	1 4	10	20	70
*Filberts edible portion average	Ten nuts	11	18	9	84	7
*Hickory nuts		13	47	9	85	6
*Peanuts edible portion average	Thirteen double	18	62	20	63	17
*Pecans polished edible portion	About eight	13	46	6	87	7
*Pine nuts (pignolias) edible portion	About eighty	16	56	22	74	4
*Walnuts California edible portion	About six	14	48	10	83	7

CEREALS

*Bread, brown as purchased average	Ordinary thick slice	43	1 5	9	7	84
*Bread corn (johnnycake) as purchased av	Small square	38	1 3	12	16	72
*Bread white home made as purchased	Ordinary thick slice.	38	1 3	13	6	81
Corn flakes toasted	Ord cereal dish full	27	97	11	1	88
*Corn meal granular average		27	96	10	5	85
*Corn meal unbolted edible portion average		26	92	9	11	80
*Crackers graham as purchased	Two crackers	23	82	9	20	71
*Crackers oatmeal as purchased	Two crackers	23	81	11	24	65
*Hominy cooked	Large serving	120	4 2	11	2	87
*Macaroni average		27	96	15	2	83
*Macaroni average cooked	Ordinary serving	110	3 85	14	15	71
*Oatmeal average boiled	1½ serving	159	5 6	18	7	75
*Popcorn average		24	86	11	11	78
*Rice uncooked		28	98	9	1	90
*Rice boiled average	Ord cereal dish	87	3 1	10	1	89
*Rice flakes	Ord cereal dish	27	94	8	1	91
*Rolls Vienna as purchased average	One large roll	35	1 2	12	7	81
*Shredded wheat	One biscuit	27	94	13	4 5	82 5
*Spaghetti average		28	97	12	1	87
*Wheat flour entire wheat average		27	96	15	5	80
*Wheat flour graham average		27	96	15	5	80
*Wheat flour patent roller process family and straight grade spring wheat average		27	97	12	3	85
*Zwieback	Size of thick slice of bread	23	81	9	21	70

MISCELLANEOUS

*Eggs hen s boiled	One large egg	59	2 1	12	68	00
*Eggs hen s whites		181	6 4	100	0	00
*Eggs hen s yolks	Two yolks	27	91	17	83	00
*Omelet		94	3 3	31	66	0
*Soup beef as purchased average		380	13	69	14	17
*Soup bean as purchased average	Very large plate	150	5 4	20	20	60
Soup cream of celery as purchased average	Two plates	180	6 3	16	47	37
*Consomme as purchased		830	29	85	00	15
*Clam chowder as purchased	Two plates	230	8 25	17	18	65

ered as concentrated at 7 with their combined weight, 7 We then find the center of gravity of this new point 7 and the remaining point, 5 The center of gravity of this point 7 and point 5 will be a point, 12, on the straight line between them, situated nearer the 7 than the 5, and dividing the distance between in the ratio of 5 to 7 At point 12 the whole combination of 12 portions may be considered to be concentrated It is evident that we could find the center of gravity of the same three points by combining them in a different order, but the result would be the same

It is also evident that more than three points may be combined on the same principles by combining them by twos and threes and then combining the combinations

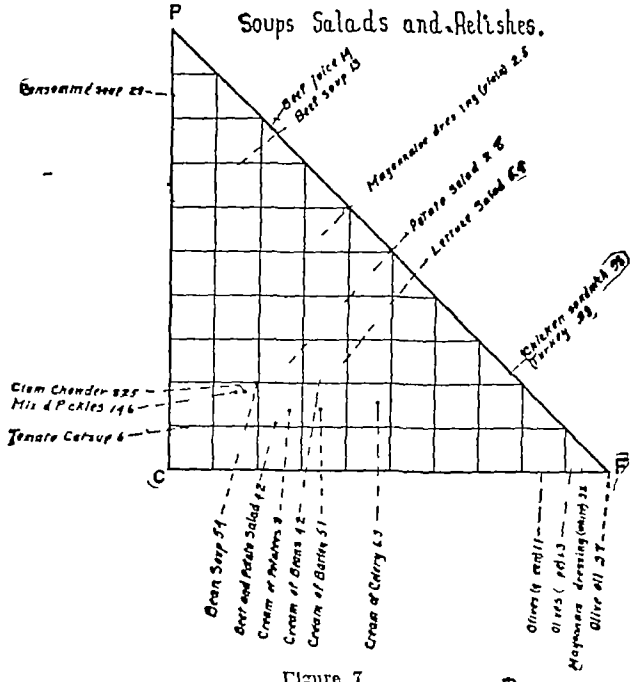

Figure 7

proteid requirements, a well-balanced daily ration for the average person will be represented by a point lying within the "normal rectangle," as shown in Figure 11 This shows that proteid should be near 10 per cent.

All foods may be classified according to their location relatively to this rectangle Thus, all foods located above the rectangle are high-proteid foods, all below, low-proteid foods, all within, normal-proteid foods Looking at the "food map" we see among the high-proteid foods, beginning with the lowest, graham bread, macaroni, tomatoes, whole-wheat bread, pine nuts, beans, buttermilk, cheese and meats Among the low-proteid foods, beginning with the highest, are most fruits (except raspberries and strawberries), cream, pecans, olives, butter, olive oil, sugar Among the foods normal in proteid are most breads, wheat flakes, corn flakes, strawberries, raspberries, chestnuts and most other nuts (except pine nuts and pecans) In the same way we may classify foods as to their richness in fat or carbohydrate, but there is a larger range allowable for these elements than for proteid High proteid foods tend to make the

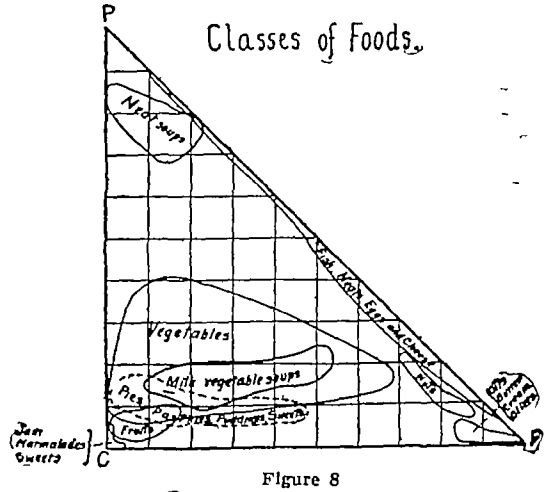

Figure 8

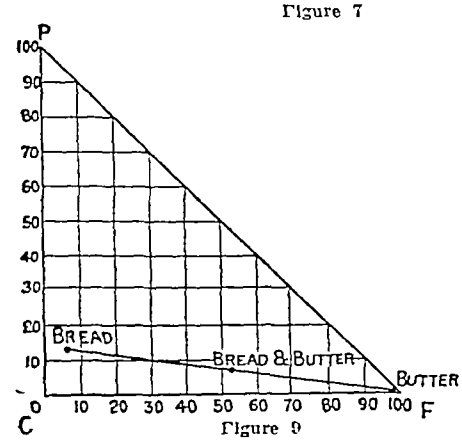

Figure 9

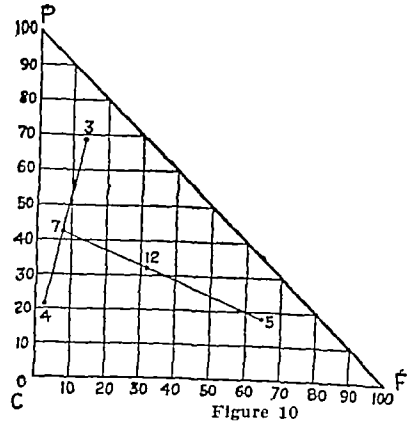

Figure 10

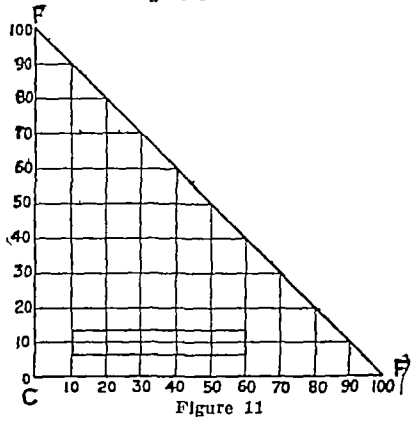

Figure 11

When all the points are combined into one point, that point will represent the entire meal If the final point thus found is labeled "22," and is located 20 per cent up and 30 per cent to the right this shows that in all twenty-two "portions" (2,200 calories) have been consumed, of which 20 per cent (440 calories) are proteid, 30 per cent (660 calories) are fat and the balance, 50 per cent (1,100 calories) are carbohydrate

The ration here exemplified contains too much proteid If we accept Professor Chittenden's[7] results as to ration high in proteid, and will do so unless balanced by low-proteid foods Most persons consume much more proteid than that in the Chittenden standard This excess may be avoided either by omitting foods high in proteid or by using them very sparingly

Since the resultant point, representing the ration, is the center of gravity of the points representing its constituents, it is evident that it can be obtained by mechanical as well as by geometrical methods For this purpose a mechanical diet indicator has been devised, as shown in Figures 12, 13, 14, 15

The essential feature of this apparatus is a card on

7 See his Physiological Economy in Nutrition New York (Stokes) 1904

which is drawn the right-angled triangle with which we have already become familiar Points on this card may be located to represent the various foods employed These points may be easily found from tables given at the end of this article Points representing the most common foods may be already printed on it At points representing foods eaten, pins with heavy heads are thrust through the cardboard (Fig 12), the weight of each representing one "standard portion" Similar pins, but one-half and one-quarter as heavy, are also provided to represent half and quarter "portions" When these pins are placed, the total ration which has been consumed is easily found, simply by counting the "portions" thus represented For instance, if there are 15 pins representing "standard portions" and 10 pins representing half "portions" (and therefore five full "portions"), the total ration is 20 "portions" or 2,000 calories In order to find the percentages of proteid, fat and carbohydrate in this ration, it is only necessary to obtain the center of gravity of all the pins For this purpose the card is placed in a basket (Fig 14) so that the center of gravity of the pins may assume a position vertically under the point of support The position of this center of gravity is easily indicated on the card by means of a vertical pricker (Fig 15), which may be pressed on the card Thus, almost instantaneously, the center of gravity is found The total time consumed in placing the pins, adjusting the card and basket, and finding the center of gravity, is found to be, for accurate work, about five minutes [8]

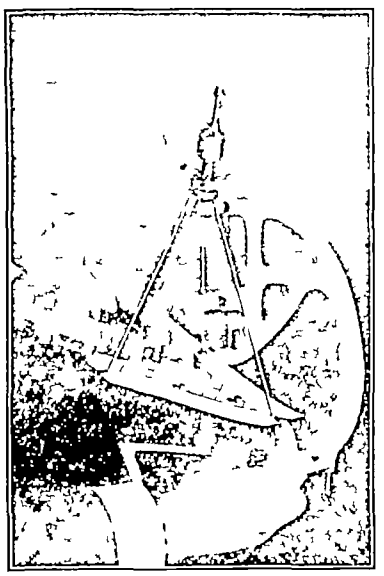

Figure 12

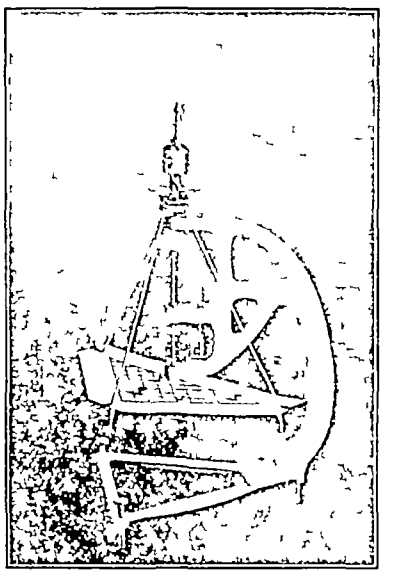

Figure 14

Figure 15

Figure 13

The mechanism in which the cardboard triangle is held is so arranged that when the cardboard is horizontal the center of gravity falls at a point indicating normal food proportions If the center of gravity is at some other point, the cardboard will tip, showing that the ration is not "balanced" If the proteid vertex tips down, it indicates an excess of proteid, if the fat vertex, excess of fat, if the carbohydrate vertex, excess of carbohydrate

It is now evident that, by means of the mechanism and the rectangles marked on the card, it is a simple matter to discover whether a particular diet conforms to any given standard It is equally simple to correct discrepancies thus found, and, if need be, the corrections may be made in advance and the balanced ration prescribed A trial ration may be put on the card, and if it fails to balance, the pins may be rearranged and balanced with far greater rapidity than the corresponding operations could be carried out by arithmetical computations

One advantage, however of the foregoing methods is that, whether the object is merely to record what is consumed or actually to prescribe, the patient need not be annoyed by having scales at table All weighing may be done in the kitchen and the food served in "standard portions" or in known multiples or fractions of such portions It is only necessary that the patient, or some one else, shall report exactly what part of the various portions served has been consumed The patient need not even know the food values of the portions served to him and thus the introspection and trepidation, which often defeat the very aim of diet prescription for

8 The weight of the cardboard and the basket certainly [illegible] It is eliminated by the construction of the basket Its center of gravity (when containing the cardboard *without* pins) exactly coincides with the point of support Hence when the basket with the card (but *without* pins) is placed on the point of support it neither to swing (which would imply stable equilibrium) nor to be top-heavy (which would imply unstable equilibrium) but is in neutral equilibrium and will remain at [illegible] article at which it is placed

the sick, may be avoided For well persons who desire to keep a record of their dietary the method here given has the advantage that when it is once made familiar it can be employed without any apparatus One soon becomes able to recognize the quantities of the ordinary foods which contain 100 calories, and to hold in memory the position on the triangle where these foods are indicated A little reflection will then enable him to judge how many "standard portions" he has consumed at a meal, and also whether their center of gravity falls within the normal rectangle If he has a good locative imagination, he can rely entirely on his mental image of the triangle Any one who has once pictured the foods on the "food map" is not likely to forget their several locations He will know that a meal in which soup, fish, meat, certain high-proteid vegetables, eggs, cheese, milk and ice cream predominate, must be too high in proteid, for all these foods are located above the "normal rectangle" Moreover, he will be able, after a little practice, to estimate roughly the calorific value of his food A "portion" of 100 calories may be ascribed to each lamb chop, or its equivalent in other meat, each (large) egg, each two-thirds of a glass of milk, each ordinary potato large slice of bread, large banana, ordinary pat or square of butter, shredded wheat biscuit or its equivalent in other cereal, eight almonds, half dozen English walnuts, one and one-half lumps of sugar, etc

To illustrate the method by practical examples, let us suppose that for a particular patient the prescription is for 2,000 calories a day, of foods so combined that the food proportions will be represented by a point within the right half of the rectangle To carry out this prescription the patient looks at the "food map" and finds no foods on it which themselves fall within the prescribed area He observes, however, that bread and butter are located on opposite sides of this area, and his eye shows him that a combination of the two in equal parts (by calories, not by weight) will very nearly fall within it, though slightly too low Corn flakes and cream combine within the set limits, milk and dates (a favorite oriental combination) fall near the mark, poached eggs on toast (with the whites left out) will also come near the proper spot, though slightly too high, any cereal foods or fruits (which lie at the left), combined with foods which lie at the right, as egg yolk, nuts or cream, butter, olives or olive oil will combine nearly right, provided the right-hand foods predominate Choosing such of these combinations as are most relished, the patient eats his meal Afterward he, his physician or nurse indicates on the triangle by pencil marks each food which has been eaten, or, if he has a mechanical diet indicator, by the weighted pins The center of gravity will then show exactly where his meal is located on the "food map," and the total number of "portions" will show how much he has eaten The cause of any deviation from the prescription will be very apparent. It may be that the point is too high, indicating excessive proteid, and this may be due to too much milk eggs or meat, or too much cereal food may have displaced the point to the left These errors may be rectified at the next meal At the end of the day from the cards used in the three meals, he selects the three centers of gravity and transfers them to a fourth card from which in the same way, the total calories and center of gravity for the three are found, this represents the total day s ration

Or, again a patient may at first be given *carte blanche* in his food, merely reporting the 'portions" eaten Each dish being served in "portions, this will require little trouble In fact, a nurse may do it all by noting what is put on a tray and what is left after the meal On the basis of the returns, the physician or nurse can tell exactly how much and what proportions the patient is eating, and his besetting dietetic sins will be evident. The physician will be enabled thereby to guide him intelligently, suggesting, for instance, that he reduce his ration to two-thirds of what he has been accustomed to, or reduce meat, eggs, etc, or take more cream and butter, etc It goes without saying that any change in diet, unless it be a change in amount only, should be gradual [9] Thus, if a person has been accustomed to excessive proteid, his stomach has probably become adjusted to this condition and secretes a large amount of gastric juice When the reduction of proteid is sudden, the gastric juice will not at first decrease in proportion, and a large part of this secretion will therefore remain unused This uncombined acid interferes with the digestion of starch and the person feels a "sour stomach" A gradual reduction of proteid, on the other hand, will avoid this difficulty The reduction may be more rapid (for the hyperacid) if the proportion of fat is increased, as fat tends to restrain the gastric secretion

In the winter of 1906 the mechanical diet indicator was employed for five months in an experiment with nine Yale students No diet was prescribed, and the indicator was used only to record the diet which the men themselves chose It was found that by following Mr Fletcher's rules of thorough mastication and obedience to appetite, the men gradually and naturally reduced their proteid The extraordinary effects on their working power are described elsewhere [10] To what extent such "natural eating" can help in pathologic cases has not yet been shown, although some physicians are reported to have found it a very valuable aid in their practice. Certainly it could scarcely fail to be more serviceable than the unintelligent and reckless diet prescriptions so often made

Whether or not diet prescriptions are given, the actual diet employed by patients should receive study This study is made easy by means of the graphic and mechanical methods [11] These methods may be used with advantage in the kitchen by housewives desirous of supplying balanced meals, and may be of special service in institutions where it is important to provide complete and well-proportioned nourishment at a minimum of cost On the mechanical diet indicator the weighted pins may be placed to indicate any proposed meal, and this meal, by a slight adjustment of the weights, may be balanced as exactly as desired

The accompanying table of foods is classified under several heads

Cooked meats	Uncooked meats
Vegetables	Dairy products
Fruits	Nuts
Sweets and pickles	Cereals
Cakes pastry, puddings and desserts	
Miscellaneous	

APPENDIX

The preceding table gives the data for the ordinary foods in a form most readily used for the graphic or the mechanical

9 Hutchinson Robert General Considerations on the Therapeutic Uses of Diet. Practitioner April 1906 p 470

10 For a short abstract see Science Nov 16 1906. A full report will appear in the Transactions of the Connecticut Academy of Arts and Sciences

11 There is no patent on this device anyone is free to make and use it. The Battle Creek Sanitarium has had experience in constructing the apparatus. A regular instrument maker may take up its manufacture later if conditions warrant.

method The figures for carbohydrate are included, although, as has been shown, they do not need to be used in practical application, the location of each food on the "food map" being completely determined by its "latitude" and "longitude," i e, the proportion of the fuel value in proteid and fat respectively The foods, so far as possible, are prepared foods such as are served on the table, but unfortunately, the main sources of information being *Bulletin No 28* of the Department of Agriculture, for food materials it has not been possible to include all prepared dishes desired. Moreover, recipes vary so that it would be impracticable to supply data for such dishes which could be used with advantage or certainty It is easily possible, however, for any one who uses the table to add to it the necessary data for any made dish of known recipe All that is necessary is to translate the weights of the various ingredients into a number of "standard portions," and then to locate these ingredients on the "food map" and find their center of gravity This will indicate the position of the composite food The weight of a "standard portion" of this food is found by dividing the aggregate weight of all the ingredients used by the number of "portions" in them, as above ascertained

Thus, to locate sponge cake, when the recipe is 3 eggs, 1 "cup" (4 oz) sugar, and 1 "cup" (4 oz.) flour, the eggs, if of ordinary size, weigh 4¼ oz. and constitute, as the table shows, 2 "portions," the sugar, weighing 4 oz., constitutes 4 65 "portions" and the flour, weighing 4 oz., 4 2 "portions" This gives a total weight of 12¼ oz, and 11 as the total number of "portions" Dividing the former by the latter, we have 1 1 oz as the weight of a "portion" of sponge cake The position on the "food map" of sponge cake is now found by putting the pins at the points on the map as indicated by the table for sugar, eggs and flour These weights, representing respectively 4 65, 2, and 4 2 "portions" the center of gravity shows the position of sponge cake, which is about 11 per cent of proteid and about 12 per cent of fat This result does not agree exactly with sponge cake as given in the table, owing to the difference in recipe, that in the table probably including shortening

Unless great precision is required, a sufficient approximation may be obtained in general by omitting fractional portions thus, we may call the eggs 2 "portions," the sugar 5, and the flour 4 The resulting center of gravity may be found roughly by the eye, without even the aid of the diet indicator It is surprising how close such a rough approximation will usually be found to the true value, as the influence of the errors in the particular ingredients, on the combined result, is small, and the various errors usually tend to offset each other

Should the reader desire to add other items to the table, either of food materials or food stuffs he may do so by using the sources from which the table is constructed. Thus, if he will obtain from the Department of Agriculture *Bulletin No 28* "Chemical Composition of American Food Materials," he may translate the figures there given into the form to be entered in the table as follows The weight in ounces of a "standard portion" is found by dividing 1,600 by the number of calories per pound given in the table. The calories per cent of proteid is found by multiplying the figure in the *Bulletin* table giving the weight per cent of proteid, by 1860 and dividing the result by the figure giving the number of calories per pound The same calculation and the same factor, 1860, apply to carbohydrate For fat the same calculation applies, but with the substitution of the factor 4220 in place of 1860 The three results may be verified by adding the resulting figures for proteid, fat and carbohydrate, the sum of which should be 100 per cent To weigh foods letter scales will usually suffice, the food being weighed in dishes and the weight of the dishes subtracted.

Abuse of Medical Charity—Is it presumption on our part to ask the trustees to protect the hospital physician from wasting his strength time and skill his capital in life on those who have no right to them? And furthermore to ask them to show due consideration to the family physician by refusing to allow well to do people to obtain free treatment at the institutions under their charge?—G W Gay, Boston

MYXEDEMA.

CAMPBELL P HOWARD, M D
Outdoor Physician to the Montreal General Hospital.
MONTREAL, CANADA

(*Continued from page 1230*)

CASE 4—*White, female, aged 46, multipara pronounced clinical picture, six years' duration, thyroid therapy, loss of 21½ pounds in eight weeks, recovery*

Patient—F A. American, housewife, Nova Scotia, Canada was admitted to the Johns Hopkins Hospital March 16, 1895, complaining of "swelling and apathy"

History—Family and personal history were unimportant. Patient was married and the mother of several children In her youth she had been a very beautiful woman, and always very active in family and social duties

Present Illness—This began insidiously about five or six years before admission, when the patient was about 40 years old, and progressed steadily until it resulted in almost complete physical and mental disability The face became bloated, the eyeballs being especially full and baggy Enormous pads developed above the clavicles Her hands and feet gradually enlarged, and the skin everywhere was unusually harsh and dry Her hair fell out and she became abnormally sensitive to cold She was dull and apathetic, but hypersensitive on one point her looks She exhibited a dislike for society, and at one time refused to see even the members of her own family Dr Osler, who knew her in her youth, at his first visit 'could scarcely believe that the bloated shapeless mass of humanity had twenty years ago been the belle of her town"

Physical Examination—Examination on March 18, 1895 revealed a characteristic edematous facies, forehead was much swollen and infiltrated but the wrinkles were not obliterated Both eyelids were infiltrated and edematous, and there were bags of edema in the lower lids The palpebral orifices were distinctly narrowed. The cheeks looked swollen, and the features were coarse The movements of the facial and ocular muscles were good Pupils were active, lips chapped The tongue was clean, smooth and swollen There was a distinct swelling above both clavicles and at the back of the neck The hands were puffy and swollen (though this varied a good deal), and the skin was glazed and cracked

The skin was universally dry and harsh The teeth were loose, several were lost and the gums had receded The hair which was formerly very abundant, was very thin, and over the scalp there were several irregular bald patches There was a marked depression, somewhat V shaped, in the anterior triangle of the neck, and no thyroid gland could be felt. The intelligence was good She was somewhat emotional, but had no delusions Cerebration was slow

The voice had become harsh and rough The pulse was from 80 to 88 to the minute The temperature was subnormal 96 5 to 97 8 degrees The weight was 158 pounds The urine varied from 650 to 890 c.c in twenty four hours specific gravity of 1008 to 1015, and contained a trace of albumin, but no casts

Clinical History—March 20, 1895 Thyroid extract, gr i s, t i d

March 22 There was sweating of the palms of hands and also burning pains in the limbs She was very despondent

March 28 The pulse gradually increased in rate averaging 95 to minute The puffiness of the face was greatly diminished and there was no longer edema about the lids She was much brighter and showed an interest in her surroundings

April 1 The temperature was often above normal and the pulse rarely below 100

April 4 She had lost 12 pounds in two weeks and then weighed 146 pounds The physical and mental improvement continued steadily

May 11 She was discharged having further improved and having lost in all 21½ pounds in weight (136½ pounds) in the eight weeks following the administration of about 287 grains of thyroid extract She was cheerful the swelling and puffiness had all gone and she was an entirely different woman The amount of urine had increased after commencing the extract and often reached 1 000 to 1,300 c c. Subsequently

discharge from the hospital Dr Osler heard on several occasions that she had remained perfectly well, was bright and alert, and engaging actively in her former social and home duties She still, however, was using at intervals the thyroid extract

CASE 5—*White, female, aged 39, tripara, typical picture, four years' duration, thyroid therapy, loss of 24½ pounds, recovery*

Patient—W A, American, housewife, of Alabama, was admitted to the Johns Hopkins Hospital Feb 20, 1896, complaining of "swelling of various parts of the body"

History—Family history was negative for goiter or myxedema Patient had measles and whooping cough once each and pneumonia twice in childhood She also had malaria in childhood and again at her thirty fourth year At her fourth or fifth year she had a swelling in the right side of her neck which finally broke down and discharged, leaving a cicatrix (tuberculous adenitis?) Menses were regular from fourteenth year to present illness She had three children, the youngest of whom was 12, no miscarriages She had swelling of her feet since birth of her first child, nineteen years before admission

Present Illness—Though for many years she had noticed "bloating of the feet," it only became pronounced when she was 35 years old, i e, four years before admission She thought that formerly the swelling occurred only in the spring time This edema spread from the feet to the hands and eyelids The eyelids were especially puffed in the morning The skin was harsh and dry At times the lips and tongue became so thick that she could hardly speak The mind had been dull of late The feet were constantly tired Numbness and muscular cramps were all over the body She was often very nervous The menses became irregular and from her thirty second year occurred only about once a year, she had not menstruated at all during the year before admission The appetite was poor and the bowels were constipated She got up once or twice each night to micturate

Physical Examination—Examination on Feb 21, 1906, revealed a large framed woman of good color There was marked pinkness of the cheeks in contrast to the excessive pallor about the eyes The skin was extremely harsh and dry There was a very marked puffy and edematous appearance of the face (especially about the eyes), the hands and also in the supraclavicular regions The feet and legs gave the appearance of an enormous edema, but there was no pitting The subcutaneous tissue had a peculiar resistant feeling

The tongue was clean The condition of the thyroid was not noted The abdomen was full, but both the abdominal and thoracic viscera seemed normal The pulse varied from 60 to 68 to the minute The temperature was subnormal, 96 8 to 98 degrees The weight was 240 pounds The urine was 600 to 1 000 c c in twenty four hours, sp gr, 1,016 to 1020 It contained a faint trace of albumin on several examinations, but once only a few granular casts

The blood examination revealed Hb, 70 per cent, red blood corpuscles, 4 232 000 white blood corpuscles, 3,600 The differential count was about normal, thus

	Per cent
Polymorphonuclear neutrophiles	70 5
Small mononuclears	17 5
Large mononuclears	9 5
Mastzellen	1 5
Eosinophiles	1 0

Clinical History—March 3 1896 She was given thyroid extract gr ss, t i d, which was increased to gr ¾, t i d, on March 5

March 7 There was a decided improvement in the condition of the skin of her hands, which was thinner and looser The pulse rate was increased

March 9 The patient had lost 10 pounds She menstruated for the first time in one year As however, she was very nervous and hysterical crying frequently and complaining of headache and pains in her back and limbs, the thyroid extract was omitted for twenty four hours

April 16 The improvement continued, the puffiness of the face and extremities disappearing, the facies losing their former dull apathy and the voice becoming natural The pulse rate also gradually increased to 88 to 100 for the minute, though there was little or no change in temperature The hemoglobin rose to 80 per cent and the red blood corpuscles to 4,400,000 The quantity of urine showed no great difference, though occasionally amounted to 1,300 or 1,400 c c. She was discharged, having taken 196 grains of thyroid extract and having lost 24½ pounds (215½ pounds) in eight weeks

Subsequent History—Oct. 6, 1905 A letter on this date from the patient stated that since discharge from the hospital her "general health had been very good," and she then weighed 170 pounds (i e, a loss of an additional 45½ pounds) On one or two occasions she had slight returns of her previous affection, which, however, were relieved by the tablets, three of which she was using at the time of writing

CASE 6—White, female, aged 38, tripara, case of moderate severity, five years' duration, thyroid therapy, loss of 4 pounds in 16 days, recovery

Patient—M W, *American, housewife of North Carolina*, was admitted to the Johns Hopkins Hospital, Feb 17, 1903, complaining of "swelling of the body"

History—Mother alive, but has symptoms resembling those of the patient Maternal grandmother and uncle died of "kidney trouble" Patient had whooping cough in childhood and measles at 22 The menses were regular until the present illness Was married and had three children, the youngest 7 years old No miscarriages Average weight, 140 pounds

Present Illness—Began at her 33rd year (1898) with a gradually developing swelling and puffiness of the skin, which was of general distribution and more marked at night than in the morning The complexion became pale, sallow and yellow Giddiness developed at the onset and persisted It was present sometimes for half a day at a time, even when she assumed the recumbent posture At first this giddiness occurred only two or three times a year, but has recently become much more frequent. Indigestion developed in 1901, but was unaccompanied by nausea or vomiting The appetite was good The bowels had been very constipated except for an attack of "dysentery" in 1901 and again in May, 1902, since which she steadily grew more edematous, especially about the eyes She had constant "buzzing in her head" since October, 1902 The eyeballs became painful and very sensitive, and there were neuralgic pains in the back and legs Weakness and dyspnea on exertion developed and gradually increased The menses became irregular and scanty in 1901, but more recently became very profuse and the flow almost continuous

Physical Examination—Examination on Feb 18, 1903, revealed a striking appearance The face was swollen and had a curious puffy edematous character, especially about the eyes Cerebration and speech were slow There was slight puffiness of both hands and feet. The skin was harsh and dry and more or less sallow in color There was no enlargement of the thyroid gland The tongue was clean The abdomen was slightly full and the bands of the ascending and descending colon were readily felt The heart and lungs were normal The pulse was rather small, 72 to 76 to the minute Temperature was subnormal, 96 8 to 98 4 degrees Weight was 138½ pounds

The blood count showed Hb, 62 per cent, red blood corpuscles 3 736 000, white blood corpuscles, 6,700 The urine varied from 540 to 840 c c. in twenty four hours sp gr 1,010 to 1 016 trace of albumin and an occasional hyaline cast

Clinical History—Feb 20, 1903 Thyroid extract, gr v, t i d

March 6 The tonsils were enlarged and the fauces were injected The temperature rose to 99 2

March 8 The temperature gradually reached normal, but the pulse rate was practically unaltered She had lost 4 pounds during sixteen days

March 15 The amount of urine showed a decided increase from the day after beginning the thyroid extract, averaging about 1 500 c c in the twenty four hours, but occasionally reaching 1 600 to 1,700 c c

The patient was discharged, practically well, after having taken 345 grains of thyroid extract in the twenty three days, and having lost further in weight

CASE 7 —*White, male, aged 51 married twice, symptoms of moderate severity, six months' duration, thyroid therapy, loss of 4 pounds in six days recovery*

Patient —A. M, Canadian, merchant of Quebec, was admitted to Johns Hopkins Hospital Nov 29, 1903, complaining of "buzzing in head," "swelling of arms and hands," "coldness and numbness of feet," "catarrhal diarrhea"

History —Family history was negative Patient had measles and scarlatina in childhood, and neurasthenia in 1899 He had worked hard and constantly for years His habits were good. He had married twice and had five children by first wife and none by second His pulse had been slow for years, but never irregular before the present illness The bowels were regular His average weight was 185 to 190 pounds

Present Illness —In January, 1903, he first suffered from an attack of "catarrhal diarrhea," which had recurred at intervals On July 1, after exposure to a hot sun while fishing, he first noticed a "buzzing sensation in the head like the sound of rapids" At the same time there was a sense of heaviness in the hands On July 10 he noticed swelling of the face about the eyes Three to four weeks later he suffered from cold and numbness of the hands and feet, which were slightly swollen The swelling became more marked on the upper extremities as far as the shoulder joints The skin of the hands and face was harsh, dry and inelastic The voice became husky and "throaty," and the speech slow There was constantly a peculiar flavor in the mouth As the sclerotics and skin had a somewhat yellow tinge, he was treated for catarrhal jaundice There was at times a sense of fulness below the heart with periods of intermittent action of the heart. He had great difficulty in keeping himself warm, requiring a heavy undershirt and a hot water bottle at night. He had not attended to business since August 1903, because of a disinclination for work and not because of any slowness of cerebration or loss of memory He had consulted several physicians, who had always found his urine clear

Physical Examination —Examination by Dr Osler on Nov 27, 1903 (two days before admission) revealed a well nourished man 5 feet 11 inches in height The face was sallow, yellowish and waxy, and looked a little swollen The eyelids were puffy and edematous as well as the skin above them There was no special swelling of the ears The skin was a little dry and hard The hands were unusually dry, a little bluish and distinctly swollen He thought that his right arm was a little swollen The general surface of the skin of the body was unchanged except that it was a little dry and harsh The pad above the left axilla was larger than above the right His voice was husky There was flattening in front of the trachea and no thyroid gland could be felt. The spleen and liver were both just palpable There was no enlargement of the lymphatic glands Cerebration was slow

Nov 29 On the day of admission, in addition to the above data, it was noticed that his expression was dull and facies heavy The hair seemed normal The gait was slow and he was deliberate in all his actions The pulse was slow (45 to 52 to the minute), blood pressure was 100 to 110 m m , hg , the radial artery was sclerosed

The temperature was subnormal, 97 to 98 degrees

The blood showed Hb 70 per cent , red blood corpuscles, 4 104 000 white blood corpuscles, 7 800

The quantity of urine before treatment was 620 c c in twenty four hours, the sp gr , 1,011, and it contained neither albumin nor sugar, but a few hyaline casts

Clinical History —Dec 1, 1903 Weight, 172 pounds He was given thyroid extract gr v, t i d

December 5 The amount of urine increased immediately after thyroid extract to 2,110 c c in the first twenty four hours, to 4 025 c c in the second twenty four hours It always remained above 1,000 c c

December 6 The patient was discharged very much improved after having taken 90 gr of thyroid extract, and having lost 4 pounds in the six days (168 pounds)

December 16 He returned to see Dr Osler who noted "a remarkable change in appearance, all the infiltration had gone from his face and eyes though he still looked a little sallow The face was no longer dry and the hands were not nearly so dry and not at all rough The stomach was very much out of sorts, though the tongue was clean The pulse was 82 to the minute

Jan 20 1904 A letter from him stated that he continued to improve with the use of thyroid extract His weight was 170 pounds

Oct 26 1905 A letter on this date states that although he had not his former vim he was very well He weighed 180 pounds without clothes He had occasionally trouble with his bowels He was taking daily one tablet of 5 gr

CASE 8 —*White, female, aged 44, decipara, atypical case, thyroid therapy, improvement, edema never entirely disappeared*

Patient —A F L, American, no occupation, of Baltimore, consulted Dr Osler Feb 28, 1895, and complained of 'swelling of the lip and face.'

History —Father died of "heart disease" otherwise family history was negative Patient had always enjoyed excellent health She had been married twenty three years, and had ten children, six of whom were living Ever since maturity there was a tendency to swelling of the feet, particularly at night

Present Illness —For a year or more before consulting Dr Osler she had been getting pale In August, 1894, she noticed that her feet and ankles were swollen, the left much more than the right, and more recently the left hand had seemed a little puffy The legs were more swollen at night than in the morning The face had been a little swollen and flabby for several months and the eyelids became edematous in the morning She thought that she had gained slightly in weight She did not complain of any susceptibility to the cold She still perspired For some time she had been very low spirited and despondent. In August, 1894, she had a rectal abscess, which, however left no fistula

Physical Examination —She had a pale yellow, very muddy complexion, the skin was dry, but there was no great puffiness of the eyelids nor had she the broad features so characteristic of myxedema There were no folds of skin on the forehead, which showed a little brownish discoloration The skin of the backs of the hands was dry and not especially puffy, but she stated that on the morning of examination the left hand was swollen The neck was not swollen, there were no large supraclavicular pads The thyroid gland could be felt The legs were swollen particularly below the calves The circumference at the ankle was almost the same as in the upper part of the leg The swelling was particularly marked about the malleoli There was no pitting on pressure There was no change in the voice The pulse was 70 and not of increased tension The temperature was 98 5 degrees There was no optic neuritis or retinitis The urine was not increased in amount, sp gr 1 017, and always contained a trace of albumin, but no tube casts

Clinical History —April, 10 1895 The patient had taken thyroid extract gr iii, t i d , for a month, before any change was noted.

June 15 The dose of the extract was gradually increased until she took gr x t i d The legs became softer less swollen and very much smaller She became thinner the appetite was better, the dryness of the skin disappeared and she was in very much better spirits

December 17 She was then taking gr xv t i d Her physician, Dr A F Morris wrote that her intellect is not at all dull, and she is full of energy and she says she feels stronger than she did" The legs swell however, on cessation of the drug Her limbs felt heavy and her feet warm and tingling There was also some swelling above the clavicles and over the abdomen

Sept 27, 1905 Her physician again reported that the patient was enjoying good health except for a severe lobar pneumonia in the winter of 1903 from which she made a good recovery There was still some edema of the limbs yet not enough to trouble her Some time ago she had discontinued the use of the thyroid extract, after having taken it regularly for some years

CASE 9 —*White female aged 55, quintipara typical case, duration probably six to seven years, thyroid therapy, recovery*

Patient—I K P H, American, no occupation, of Tennessee, consulted Dr Osler Sept 16, 1897, and complained of weakness and swelling of face and extremities'

History—No family history of goiter, myxedema or any neurosis

Patient had always enjoyed good health, had been married thirty one years, and had five children, all of whom were girls

Present Illness—She first noticed six or seven years before, weakness and tingling over the body, but chiefly on the left side She then suffered from 'sick spells" during which her color became yellow brown, and there was numbness, weakness, and prostration She next began to suffer with palpitation of the heart and feebleness and weakness became constant During her fifty fourth year (1896) she first noticed swelling of the face and extremities, though since 1890 or 1891 the face had looked "greasy and thick" On account of the latter one physician had treated her for erysipelas for six months Later, the body became very much swollen, there was never diarrhea or uterine hemorrhage. For three months before consulting Dr Osler she had taken thyroid extract, gr v, t i d., with marked benefit

Physical Examination—Examination on Sept 16, 1897, revealed an elderly woman with a very yellow anemic color The face was not specially moon shaped or infiltrated, though there was still a little fairly characteristic infiltration about the cheeks The forehead showed remains of the former tension of the skin and she was unable to pucker up the forehead There was no special pigmentation of the face The tongue was clean. The neck was large and dark in color The trachea was easily felt, but the thyroid was not palpable There was no longer any infiltration over the trunk The hands were a little suggestive, the skin being rather relaxed. There was marked infiltration of the skin of the left arm, while the dorsum of the left hand was also somewhat infiltrated. Further, on the palm of the left hand over the head of the metacarpal bone and first phalanx of the index finger, the skin was remarkably infiltrated and swollen and she could not close the left hand well The ankles were a little infiltrated, but did not pit on pressure. There was a remarkable degree of infiltration of the abdominal wall There were no signs of any diffuse scleroderma

Subsequent History—Jan 19, 1898 Her physician, Dr C P Fox reported that the patient was almost well

Oct 16, 1905 Her physician, Dr C P Fox, wrote that she was in fair health, somewhat anemic, but showing no symptoms of myxedema except a slight scleroderma, principally about the hands and terminal phalanges Temperature was normal and voice clear Hair rather thin and dead looking Mental faculties clear and memory good Digestion regular Urine has not contained any albumin At one time she was troubled with an "irritable heart" due to excessive use of the thyroid tablets (gr x, t i d) She now takes gr v, t.i d.

CASE 10—*White, female, aged 29, primipara, typical case, duration two years thyroid therapy, loss of 40 pounds in eight months, recovery*

Patient—M L A American no occupation, of New York City, consulted Dr Osler Dec 2 1904, and complained of "swelling all over the body

History—Family history was negative except for the fact that her father and mother were first cousins Patient had no serious illness until her twentieth year, when she had a severe attack of typhoid fever She married at 21 and had one child, now 8 years old

Present Illness—This dated back two years She rapidly became stout and within a year rose from 130 to 185 pounds There were puffy swellings all over the body There was one on the back of the neck which gradually disappeared The hands became so swollen that it necessitated the filing off of her rings Her feet became so swollen that she could not get her shoes on The swelling of the body often prevented her wearing her corsets Her hair fell out She was always cold and could never get warm She felt better in warm weather She was always tired and had no ambition or interest in anything At times she felt restless She became absent minded and as often very melancholy The menses were irregular and scanty A diagnosis of myxedema was made by her physician, Dr Edgar Smith and she commenced thyroid extract, gr v, q d, in March, 1904, since which time the edema diminished and she lost nearly 40 pounds (weighing in December but 137 pounds) She consulted Dr Osler chiefly for the mental depression and absent mindedness

Physical Examination—Examination revealed a healthy looking woman The facies were no longer myxedematous There was plenty of hair There was neither pallor or pastiness of the complexion There was, perhaps, a little puffiness about the eyes She seemed bright and active. There were no pads above the clavicles The neck was not full The outlines of the sternomastoid and sternothyroid muscles were very marked There was a distinct groove between the thyroid cartilage and the latter No definite thyroid gland was palpable There was no special puffiness of the hands, which felt warm, though she complained of being cold. Over the hips there was still a little puffiness and the skin was a little lax, but did not pit Skin was nowhere dry The heart sounds were clear, and the pulse regular and of good volume A letter to the patient in October, 1905, was not answered

AMERICAN SERIES

I have collected from American literature from 1881 to July 1, 1905, 92 undoubted cases of myxedema Some few others were not accepted owing to an insufficiency of the data or a probable error in the diagnosis Many cases reported as myxedema were examples of cretinism, which with operative myxedema are not included in the analysis Two of my 10 cases had been previously reported, so that the entire American series includes 100 cases The latter I intend to analyze for comparison with the other published series.

RACE

By far the great majority of cases occurs in the white race It is usually stated that "no cases have been recorded in the colored race," yet in America, E E Maxey,[19] in 1895, reported a typical case in a negress H J Berkely,[20] in 1897, reported 8 instances of localized myxedema-like deposits in the scalp of 8 colored patients in Baltimore As the latter were not instances of true myxedema, only Maxey's case was included in my series Hence there was an incidence of but 1 per cent in the colored race More recently (1905), instances of the disease in the natives of British India have been reported by Hamilton, Hope and Smith[21]

NATIONALITY AND LOCALITY

Myxedema occurs most frequently in cold climates, and is probably more frequent in Europe than in any other continent Of the European countries, Great Britain produces the majority of the cases In England it is more prevalent in the north and especially in the lower banks of the Tyne valley It seems to be still more common in Edinburgh and Dundee in Scotland The London committee found that of 76 cases, 26 were from England, 5 from Scotland, 2 from Ireland and 15 from France, of which 11 were from lower Brittany In Germany and France the disease is rare Of my series of 100 cases, 16 patients were stated to be of foreign birth (English 5, Scotch 3, Irish 2, German 3, Austrian 1, Polish 1, Italian 1) Of the remaining 84, 19 were stated to be American-born and an absence of note to the contrary in the other 65 may lead one to assume that they were also of American birth Hence 84 per cent of my series were presumably born in America

As to the distribution of the disease in America, the data are rather inadequate In only 31 cases was the

19 Med Sentinel Portland Ore 1897 iii
20 Am Jour Insanity 1897 98 liv
21 Indian Med Gaz. Calcutta, 1905 xl.

locality definitely stated Of these one patient had developed the disease in England and another in Poland Of the remaining 29, 11 were reported from Canada or the northeastern states (Ontario 2, Quebec 2, Nova Scotia 2, Vermont 1 Massachusetts 1 and New York 3), 4 from the Middle West (Michigan 2, Wisconsin 1, Indiana 1), from the West (California 2, Colorado 2, Kansas 1, Idaho 1), and 8 from the South (Maryland 3, Virginia 2, North Carolina 1, Tennessee 1, Alabama 1) In 69 other cases though the locality of the patient was not stated, that of the physician may give some clue In the group 56 cases were reported by northern physicians, 10 by western and 3 by southern.

Hence it would appear from a study of both of these groups that in America, myxedema is widely distributed, though apparently more prevalent in the northeastern districts I say apparently, for one must allow for the greater population and the greater facility for observation and publication in the northeast It is of interest to note that Dock is quoted by Messinger[22] as having commented on the rarity of myxedema in Michigan, although other diseases of the thyroid gland are common there

Since I began the study of my cases H. C Moffitt has stated that he believes that diseases of the thyroid gland are more common in California than in many other states in America He collected 83 cases from California, of which 53 were from San Francisco He found myxedema was more common in the "bay counties" of California which, however, were the most densely populated

SEX, AGE AND SOCIAL STATUS

It has long been recognized that females are more prone to the disease than males The London committee collected 94 females to 15 males (6 to 1) In 150 cases, Hun and Prudden[10] found 113 females, 32 males and in 5 the sex was not stated (3 5 to 1) In 370 cases Murray gave a much higher proportion, viz, 322 women to 48 men (7 to 1) In my series there were 86 women, 13 men, and one case in which the sex was not stated (6 6 to 1)

As to age it has been found that no period of life, from infancy to extreme old age, is exempt The cases before puberty do not interest us here The London committee found that the first symptom of the disease manifested itself in the third to fifth decade in 49 of 84 cases

Hun and Prudden's[10] tables (which unfortunately include cretins) show that the average age at onset was 38 years in 76 women, and 42 years in 20 men In 274 cases Murray found that the disease developed between the fortieth and forty-fifth year in women and from the thirty-fifth to the fiftieth year in men My table shows the preponderance of both sexes in the fourth and fifth decades In one male the disease first appeared at the advanced age of 68 years In 12 females the age at onset was between 50 and 60 years, and there was no patient over 60 On the other hand in a large proportion of females (13 of 87 females or 15 per cent) the disease occurred between 20 and 30 years in contrast to an incidence among the males for the same decade of 1 out of 13 cases of 7 6 per cent Hence we may say that the disease is relatively more frequent in women from 30 to 60 and in men from 30 to 50

Decade	Males	Females	Total
15-20 years	1	1	2
20-30 years	1	13	14
30-40 years	4	26	30
40-50 years	4	29	33
50-60 years	1	12	13
60-70 years	1		1
Not stated	1	6	7
Grand total	13	87	100

The social condition plays but a minor role as an etiologic factor The London committee thought that the lower classes were most prone In the American series the status of the patient was usually not given, yet it is interesting to remark that 9 of the 10 cases from this clinic were treated in the private wards

FAMILY ANTECEDENTS AND HEREDITY

Unquestionably there is a thyropathic tendency in certain families In other words the disease may be transmitted directly from either parent, but more commonly from the mother Again several members of the same generation may be attacked Thus in the London series in 2 of the recorded cases the patients were sisters, in 2 they were relatives, while in one the father and in another the mother in all probability died of the disease In other words there is a family history in 6 6 per cent. Hun and Prudden refer to one family in which 3 sisters had myxedema, one of whom had a daughter with the disease Altogether they had 9 cases (16 per cent) with a family history of myxedema and there was direct transmission in 8 per cent

In my series some mention is made of the family history in 68 cases Of these 8 had a history of myxedema in the family (11 8 per cent.), which, however, includes 2 of Hun and Prudden's[10] cases Exclusive of the two latter, one woman had a brother die from myxedema and one sister living with slight myxedema In another case a woman had an aunt and a cousin with pronounced myxedema Another woman had a sister with myxedema, still another with a myxedematous mother, while the patients in cases 1 and 2 of my personal series were sisters, who had a third sister die with exophthalmic goiter In the American series there was another woman whose mother presumably had myxedema It is possible that consanguinity in the parents may predispose to myxedema There are practically no statements as to this factor in the reported cases, but in the two cases in which this point was inquired into in my personal series it was found that in Case 3 the parents were second cousins while the grandparents were first cousins and in Case 10 the parents were first cousins It would be interesting to get more data on this question The London committee also include neuroses and tuberculosis as predisposing causes Thus in 12 of their series of 16 per cent, in 13 cases or 25 per cent of Hun and Prudden's[10] and in 8 cases or 11 8 per cent of my series there was history of insanity or other neurosis As to tuberculosis there was a history of phthisis in the near relatives of 20 patients (25 per cent) of the London cases, in 9 (17 per cent) of Hun and Prudden,[10] and in 10 (11 7 per cent) of my series

PERSONAL ANTECEDENTS

The usual antecedents of chronic maladies viz alcohol and syphilis, play little or no part In the London series there was a history of syphilis in 6 and intemperance in but 8 of the cases Hun and Prudden[1] found a history of syphilis in 3 while in my American series there was a history of syphilis and alcohol in 2 cases each In women myxedema bears some relation to the marital state Of 81 cases in which the point is noted only 10 of the patients were married and

2. Trans Mich Med Soc 1894 xviii

rapid child-bearing, according to most authorities seems an important predisposing factor In the Hun and Prudden[10] series of 64 cases in which a statement is made in regard to the number of pregnancies, 4 patients were nulliparæ and the other 60 were multiparæ, having borne on an average 5 children In the London series 62 of the 69 patients were married women who had borne children and 14 were single, 16 had given birth to 8 or 9 children each Of the 71 married women in my series there is no statement as to the number of children in 22, of the remaining 49, 6 were nulliparæ, 3 had one miscarriage each, while 40 had one or more children with an average of about 5 children each Fourteen women had six or more children, two of whom had 12 each Five of my series and 15 of that of Hun and Prudden[10] dated the onset of myxedema from their last pregnancy In 6 of Hun and Prudden's and in one of my series the onset occurred directly after a severe puerperal hemorrhage It has been suggested that the menopause may also play some part In only three of Hun and Prudden's cases, and in but one in my series was it definitely stated that the disease commenced at the menopause, although in a number of other cases it occurred about that time Thus in 7 of my series the menopause preceded the onset of the disease As myxedema is most frequent in women between the ages 49 and 45 the usual age for the menopause, atrophy of the thyroid gland and with it myxedema may have some fairly constant relation to changes in the menstrual function

Of other possible predisposing factors mental shock and worry must be considered There was a history of this in 27 of Hun and Prudden's series and in 18 cases of mine The acute infections, except in so far as they may be associated with or followed by a thyroiditis and subsequent atrophy, can be left out of reckoning In one case there was a history of glandular inflammation of the neck with subsequent atrophy of the thyroid gland In another case a severe attack of malarial fever just antedated the onset of symptoms In short we may say that excessive child-bearing and mental shock and worry may play no inconsiderable rôle in the etiology

RELATION OF GRAVES' DISEASE

I believe that a history of exophthalmic goiter preceding the onset of myxedema would be more frequently elicited if more careful inquiry were made In three of the American series (of which one was Case 2 of my series) there was a definite history of Graves' disease preceding the onset of myxedema, 3, 10 and 14 years, respectively Baldwin,[23] in 1895, reported 4 instances of myxedema following Graves' disease in from 2 to 5 years Of further interest is a case reported in 1893 by Maude[24] of a woman with myxedema whose daughter had Graves' disease Moffitt[17] refers to a similar case In my series two sisters (Cases 1 and 2) had myxedema one following exophthalmic goiter while a third sister has since suffered from exophthalmic goiter Both myxedema and Graves' disease have a special hereditary tendency of their own That of the former has been referred to under the family history That of the latter may be illustrated by the fact that in 5 of 40 cases collected by MacKenzie there was a family history of the disease Osterrieher reported the case of an hysterical woman who had 10 children 8 of whom had exophthalmic goiter one of whom in turn had 4 daughters with the same disease

23 Lancet 1895 i
24 St Barts Hosp Rep 1893 xxix.

MORBID ANATOMY AND PATHOGENESIS

The morbid anatomy of this disease has been fairly well studied In my American series there were 5 autopsies, all fairly completely reported

THYROID GLAND

The thyroid gland, on the disease of which myxedema depends, is diminished in size and loses its dull reddish tint of health, becoming yellowish or pale Occasionally the gland is increased in size, but in such cases is functionally inactive A delicate fibrous tissue invades and replaces the proper glandular tissue There is a small-celled infiltration of the walls of the vesicles, accompanied or shortly followed by epithelial proliferation in the vesicles themselves Next the gland becomes converted into a delicate fibrous structure in which clumps of small round cells, evidently the remains of vesicles, are scattered In the last stage the capsule is much thickened, while the parenchyma of the gland is made up almost entirely of fibrous tissue in which small islets of round cells are sparsely placed There is also an end arteritis and periarteritis resulting in a diminution of the lumen of the vessels Ord[25] writes

> It appears to me that probably the atrophy of the gland productive of myxedema is frequently due to inflammatory destruction of the gland tissue

The process is analogous to that in cirrhosis of the liver or kidney There was atrophy of the gland in all five of the American postmortems

SKIN

The skin on section yields no serous exudate, but remains unaffected and jelly-like Histologically there is nuclear hyperplasia and development of connective tissue, both of which changes occur chiefly in the neighborhood of the sweat and sebaceous glands and around the hair follicles The epidermis may be atrophied and the lymph channels dilated Sometimes there is an unusual interval between the bundles of fibrous tissue of the corium as found in ordinary edema There is usually an endarteritis of the cutaneous vessels, but the nerves are generally unaffected In the sweat and sebaceous glands the epithelium becomes swollen and later the nuclei proliferate and the lumen of the tubule becomes occluded The hair follicles are surrounded by fibrous tissue which sooner or later contracts and causes atrophy of the roots These changes, then, account for the loss of the hair and the diminution or absence of the secretion of sweat and sebum

NERVOUS SYSTEM

According to the Clinical Society's report, there is no important change in the central nervous system Boyce and Beadles found a central endarteritis in one case of myxedema associated with insanity, and in addition a colloid material in many of the vessels and perivascular spaces Cushier[26] found thickening of the vessels of the spinal cord and atrophy of the cells of the anterior cornua in one case The hypophysis cerebri was found enlarged in 2 cases of myxedema by Boyce and Beadler and in 1 case by Ramsey Hunt[27] An explanation of the origin and mechanism of the production of the nervous manifestation has been sought for by various authors Hadden[8] believed them to be due to a contraction of all the peripheral lymphatics owing to a disturbance of cer-

25 Allbutt's System of Medecine v
26 Arch of Med New York 1882 viii.
27 Am Jour Med Sci 1905 cxxix.
28 Brain 1882 v

tain centers seated probably in the medulla and acting through the sympathetic system Clouston[29] ventured the following hypothesis

The neuroglia of the cortex becomes to a slight degree water logged by mucin, which causes lowered anabolism and catabolism of the cells, whose reactiveness is thereby impaired

The majority of writers, however, ascribed the nervous symptoms to the padding of the peripheral nerve endings by the myxedematous deposits which so interfere with the transmission of the afferent impulses that the central structures suffer secondarily by virtue of the defective afferent conduction The most modern conception is the toxic theory, according to which there is an absence of the thyroid secretion, which is either itself essential to metabolism or neutralizes otherwise toxic products of metabolism

HEART

The heart frequently shows hypertrophy of the left ventricle in association with a slight fibrosis in the kidneys There is a remarkable discrepancy between the symptoms of cardiac insufficiency in myxedema and postmortem degeneration of the myocardium Slight atheroma of the large vessels was found in more than half of the London series

KIDNEYS

The kidneys have been enlarged in some cases owing to the presence of large quantities of a transparent or faintly granular material which interferes with the renal tubules

CHEMICAL ANALYSIS

A chemical analysis of the tissues will reveal an increase in the amount of the mucin in the skin, connective tissue, tendons, etc, especially in the stage of marked tumefaction, though not to the same extent as was first maintained Hun and Prudden[10] found a normal amount of mucin in the skin in one instance, and they did not believe that the mucin is so invariably increased as to justify the name myxedema In the later or atrophic stage there is no apparent excess of mucin The excess of mucin results from the degeneration of the protoplasm of the epithelial cells, of the goblet cells of the mucous membrane and of the cells of the acini of mucous glands The mucin forms a constituent part of the ground substance or stroma of the connective tissue in which the cells and fibers are buried It is a muco-albuminous material of which one of the constituents is mucin, the other a proteid of the globulin class resembling the paraglobulin of the blood

SYMPTOMATOLOGY

ONSET

The onset, as a rule, is very insidious Several months or even a year may elapse before the symptoms are definite For this reason it is often difficult to determine the duration of the disease In a few cases, especially in young adults, the symptoms develop rapidly and become marked in a few weeks A case reported by Osler[30] is a good illustration of this The disease in a man, 31 years old ran an acute course of 5 months with myxedematous symptoms associated with tachycardia, glycosuria, melena, mania and death

The first symptom as a rule, is languor The ordinary daily duties become an effort if not actually burdensome Then a constant chilliness or perhaps merely a greater sensitiveness to cold than formerly may be noticed Slowness of motion and increase in bulk make their appearance Hun and Prudden[10] found that when the disease did not commence insidiously, it usually commenced with some nervous or cutaneous manifestation

SOLID EDEMA

This is the most characteristic symptom and that from which the disease derived its name The edema is best developed in the loose subcutaneous tissues and is very slight where the skin is firmly adherent to the underlying structures The edema has certain definite characteristics, it is sold and firm, does not pit on pressure, is not affected by gravitation, nor when pricked does it exude fluid unless a watery edema be also present Hun and Prudden[10] explain the absence of pitting in myxedema by the fact that the edema is confined to the superficial layers of the corium where the interspaces are so small and the interlacement of the fibers so fine that the fluid is not easily driven away by pressure

The swelling in the majority of cases is first detected in the face, though the London committee thought that the legs and feet were most frequently the primary seat of the swelling Sooner or later the edema becomes general, with a consequent increase in the size and weight of the body There was increase in both bulk and weight in 46 of 50 cases in the London series In the American series there was a definite statement as to the weight in 30 cases, of which 27 showed an increase, 3 of 100 pounds or over, 3 of 50 pounds or over, 4 of 25 pounds or over, and only 1 under 25 pounds In 16 cases no exact figures were given In 3 cases there was some loss of weight. The edema may vary from time to time under differences of temperature, being greater in cold than in warm weather

The Face—The face is most frequently involved, thus in our series it was edematous in 91 cases, of which the eyelids alone were affected in six In only one case was the face noted to be unaffected The features are broad, puffy and coarse The eyelids are sites of transparent swelling, often described as "translucent folds," with drooping of the upper lids, to overcome which the eyebrows are arched in a peculiar fashion The nostrils are swollen and broadened The lower lip is thickened, everted and livid The mouth is widened transversely There is also a well-defined hectic patch over the cheeks and nose in sharp contrast with the pallid orbital regions There is great diminution in the mobility of the features, giving rise to a very characteristic facial expression The latter may be best described as "heavy" "apathetic" mask-like," "stolid or cretinoid" The solid edema obliterates the special character of the individual features resulting in a strong family resemblance between all cases of myxedema Ord[31] in 1898 tritely remarks that "the total effect is that of a mask of sorrowful immobility" The effect of the edema of the face is so characteristic that once seen will never be mistaken for anything else and is as pathognomonic as the facies of cretinism In my series there were the characteristic facies in 93 cases in 36 of which the hectic flush was also noted In the great majority of the 93 cases the description was in identical terms and in only a few were such general terms as "cretinoid" "myxedematous" "mask like" etc used The nose is considerably increased in circumference so that the ordinary collar feels uncomfortably tight In 18 of my series it was enlarged in 2 cases of which the edema was

29 Jour Mental Sciences 1894 xl
30 Johns Hopkins Hosp. Bull., 1892 iii.

31 Brit. Me[illegible] 5 ii.

chiefly confined to the back of the neck, and in one of the latter it was so great as to tilt the chin forward on the sternum

On each side of the neck above the clavicles are large soft projections, of dough-like consistency, consisting partly of fat, altered connective tissue and possibly in part of veins These supraclavicular pads are similar to those seen in cretinism Hun and Prudden[10] found them present in 90 per cent of their cases They were noted only in 25 of my series, though their absence was commented on in but two others

Hands, Feet, Etc—The hands are uniformly affected, being broad, clumsy and "spade-like"—a term first suggested by Gull. The fingers are swollen and moved with difficulty The hands alone were involved in 47 cases In several cases the fingers were said to be clubbed, and in one case the finger points were described as enlarged In another 27 cases the entire upper extremity was attacked, though usually the edema is most pronounced in the forearms The feet and legs may be similarly affected, as was noted in 57 of the American series Slight watery edema of the skin, though not uncommon, is usually transitory and when persistent is certainly accidental Pitting of the leg was noted in 7 of the series and in another 20 its absence was commented on The extremities, too, are usually cold, often purple and livid The abdomen is not uncommonly swollen and pendulous (27 cases in my series), due of course, rather to infiltration of the walls than an actual ascites The navel may protrude as it does in cretinism, though the low position of the navel is not the rule The genitals are sometimes involved in the process (2 cases) The entire trunk may be the site of the firm edema (10 cases), and, in fact, the edema may be general over the entire body (13 cases) In addition, there may be localized areas of infiltration of considerable size Thus in one case a large tumor was present in the middle of the thigh

CUTANEOUS SYSTEM

The skin and its appendages show marked and characteristic alterations, which increase with the progress of the disease The skin itself is most frequently involved, being abnormal in 95 of the 96 cases in my series (99 per cent) In 4 other cases no comment was made on the condition of the skin It is usually dry and harsh to the touch, owing to the diminished activity of the sudoriferous and oftentimes the sebaceous glands In fact, sweat may be entirely absent, as was the case in 27 per cent. of my series Desquamation often occurs in the form of a fine powder over the face, trunk and extremities Sometimes the skin is desquamated in larger flakes, or even almost entire casts of the fingers or hands The latter is more commonly seen following thyroid therapy In early or mild cases the skin may be moist, smooth and otherwise normal except for a little puffiness and loss of elasticity

The color of the skin, more particularly of the face, is usually altered It may be merely sallow, gray or more often yellow The skin was noted as yellow in 13 of Hun and Prudden's[10] series, as well as in 13 of mine (13 5 per cent.) This may be so deep as to be mistaken for actual jaundice (two cases) Areas of pigmentation are by no means infrequent, especially about the face and neck, as occurred in 12 cases in my series and in 5 in Hun and Prudden's The areas may be small and deep yellow (chloasma) or they may be large and irregular and consist merely of a yellowish brown stain In one of my series actual bronzing was noted Warts and moles were relatively frequent and occurred in 4 cases of my series and in 12 of Hun and Prudden's

Various forms of rashes occur, as erythemata (2 cases), vesiculi (2 cases), urticariæ (2 cases) and herpes (1 case) More serious inflammatory conditions may develop, as ulcers (1 case) and phlegmonous erysipelas with gangrene (2 cases) Pruritus was present in one case without evidence of diabetes Lineæ atrophicæ may be conspicuous The hair is very commonly diseased, as was the case in 72 of 77 cases (93 per cent.) in my series Hun and Prudden[10] noted loss of hair in 86 per cent The usual indications of defective nutrition of the hair may be present, namely, falling out, dryness and coarseness, brittleness, a loss of luster or change in color More commonly the hair of the scalp, axillæ and pubes is affected, but the eyebrows and eyelashes may become very thin, or even be entirely lost More rarely there is loss of hair of the entire trunk, extremities and chin Sometimes a crop of lanugo-like hair will devlop The scalp itself is often dry, scurfy and brown with many cracks in the epidermis The nails may also show defective nutrition They were diseased in 32 of 37 cases (86 per cent) in my series, in 21 of 44 of the London series (47 per cent) and in 10 of 13 of Hun and Prudden's series (70 per cent.) They are usually brittle and ridged and longitudinally striated They may be stunted, discolored or abnormally curved In two of my series there was actual clubbing of the fingers While more commonly the nails of the fingers alone are affected, those of both the fingers and the toes or even of the toes alone (3 cases) may be diseased

TEETH AND MUCOUS MEMBRANES OF MOUTH

The teeth are frequently diseased In 18 out of 20 cases (86 per cent) of my series they were noted as either loose, brittle, carious or as having fallen out, while in Hun and Prudden's[10] series they were loose or lost in 64 per cent and decayed or brittle in 28 per cent The mucous membrane of the mouth and lips is frequently swollen and pale and very apt to be bitten during mastication The lips are often enlarged (19 cases), everted and pendulous, and may be of a dark purplish or violet hue More commonly the tongue is enlarged, swollen and hypertrophic (42 cases), often to such a degree as to interfere with speech Rarely it protrudes from the mouth as in cretinism It may appear anemic or more rarely purplish in color The soft palate is sometimes swollen and will then hang down on the tongue, its mobility may be considerably impaired The mucous membrane of the nose does not escape One patient in my series consulted a rhinologist for nasal obstruction due to a myxedematous condition of the nose The gums are often spongy and soft and recede from the teeth They often bleed very easily and may be ulcerated They were noted as abnormal in 18 or my series With the involvement of the buccal mucous membrane there is frequently salivation (13 cases), more especially at night or when asleep The saliva often runs out of the corners of the mouth, giving to the patient the facies of an idiot Sometimes the mouth is very dry, with even total loss of the salivary secretion Hun and Prudden[10] found the mucous membrane of the mouth was swollen in 95 per cent and anemic in 47 per cent The larynx also may be pale, swollen and edematous with separation of the cords and consequent hoarseness The larynx was involved in 4 patients of my series, two of whom first consulted a laryngologist who in both instances made the diagnosis

of myxedema Hun and Prudden[10] found anemia of the larynx in 70 per cent, swelling in 56 per cent. and lack of approximation of the cords in 56 per cent. The nasal mucous membrane may present a similar picture as the other mucous membrane (2 cases) The frequency of rhinorrhea or nasal discharge (6 cases) would suggest a more usual involvement of the nasal mucous membrane The conjunctivæ sometimes do not escape (3 cases) and lachrymation is not infrequent (5 cases)

(To be continued)

THE DIAGNOSIS AND TREATMENT OF MALARIAL FEVER

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The object of this paper is to lay emphasis on the accurate diagnosis of malarial fever, to review at some length the various conditions often ascribed to an infection with the malarial parasite, and to consider some points in the therapeutics of this malady

DIAGNOSIS

Blood Examination—By this means only can a positive statement as to the presence of the malarial organism be made The technic involved is certainly very simple and, as a rule, it is not a difficult matter to demonstrate the parasite in either the fresh preparation or in a blood film stained with any of the good eosin-methylene blue mixtures In this connection I should like to lay some stress on the importance of the careful examination of the fresh blood, which can be done very readily, provided a clean slide and coverslip be used and a very small drop of blood be taken, thus insuring a thin, well-spread field The pigmented forms are easily recognized and should not be confused with any structures found in normal blood The pigment granules are fine and dark-brown in color, while the granulations of the leucocytes are more or less refractile The eosinophile granules are much larger, round and regular in outline and not as dark as the pigment in the parasites The plasmodium, of course, is regularly contained within the bodies of the red blood cells, although a few extracellular forms are often seen, due to the rupture of some of the cells in making the preparation It is not uncommon, however, especially in malaria, for the leucocytes to contain small particles of pigment which they have ingested by their phagocytic action Such cells should be recognized, of course, by their general structure, containing, besides the pigment, a nucleus and the refractile granulations The beginner may be somewhat misled by small clumps of platelets with radiating strands of fibrin, the so-called "granular masses of Schultze" but these do not resemble at all the hematozoa The crescents and ovoids of the estivo-autumnal fever are very characteristic and are readily recognized when seen but they do not appear in the peripheral circulation until the fifth to the seventh day of the disease The demonstration of the young hyaline forms, best found just after a chill is more difficult but in a tertian infection attention may often be drawn to a corpuscle containing the parasite by the fact that it is swollen and larger than those surrounding it The recognition of the hyaline forms is rendered uncertain except to the eyes of a well-trained observer by the occurrence of the endoglobular degenerations which are invariably present sooner or later, depending on the condition of the blood and the mechanical insult offered the red blood cells in making the preparation

It is generally stated that the parasites are most easily found in stained films, and this is undoubtedly so if they are few in number, but this should not discount the general value of the examination of the fresh blood In stained specimens care must be taken not to confuse the platelets, which are usually numerous in malaria with parasites, especially when they are superimposed on red blood cells or are gathered into clumps resembling somewhat a segmenting form Small particles of sediment or detritus from the staining solution often have a blue color and may contain granules of dirt resembling pigment These can be differentiated from the parasite by the absence of the small red-staining chromatin body Certain cases of malaria in which the parasites are so few in number as to be missed in the ordinary examination may sometimes be recognized by the method suggested by Ross For this, thick blood smears are made, so that a good many layers of blood corpuscles are superimposed one on the other After drying in the air, they are carefully immersed in clear water until all the hemoglobin is dissolved out They are then fixed and stained in the ordinary manner The crescents of the estivo-autumnal fever stand out prominently, but the other smaller forms of the parasites would be lost among the mass of leucocytes present The laking of the blood may be hastened by employing a dilute solution of acetic acid, e g, 0 5 per cent, and afterward neutralizing with a weak solution of ammonia water The best time to study the blood is just before a chill, as it then contains the adult pigmented forms which are the easiest to recognize

The leucocyte count in malarial fever shows a normal or decreased number of these cells This is a most important point in diagnosis and serves at once to differentiate this disease from many conditions associated with a remittent or intermittent temperature curve In 82 recent cases of estivo-autumnal fever at the Johns Hopkins Hospital[1] the mean leucocyte count was 3,500 per cm with only seven cases above 10 000, and in tertian infection the mean count was 4,500 in 70 cases with five above 10,000 It is almost impossible to lay too much emphasis on the value of a leucocyte count in all cases of fever, as it immediately places the case in one of two groups, thus eliminating a large number of possible conditions which, like malaria, may be accompanied by chills and an irregular fever A leucocytosis may occur in the paroxysms of pernicious malaria, in certain rare cases of malarial hemoglobinemia, and with the occurrence of complications

The differential count of the leucocytes, while possibly not so instructive, is often most suggestive In malaria there is a pronounced increase in the relative number of the large mononuclear cells with a diminution in the number of small lymphocytes and the polymorphonuclears Of late much importance has been attached to these facts especially in certain cases of probable malaria in which prolonged search has failed to demonstrate the plasmodium Delaney[2] concludes that an increase in the proportion of the large mononuclear cells from the normal 1 or 2 per cent to or beyond 12 per cent is highly suggestive of malaria Kraus[3] of Memphis, has reported the findings in 204 cases in which the average proportion of the large mononuclears was

1 Emerson Clinical Diagnosis J B Lippincott Company 1906
2 Brit Med Jour., March 28 1903.
3 The Journal Oct. 22 1904

19 5 per cent, while that of the small lymphocytes was 14 8 per cent, and he lays particular emphasis on the relative increase of the large over the small mononuclears The mean average in a large number of cases at the Johns Hopkins Hospital, as given by Thayer,[4] is 16 9 per cent of large mononuclears These cells may also be increased in typhoid fever (after the second week), measles, syphilis, and possibly in influenza, but not to the same extent as in malaria Of course, an adenopathy must be excluded It is not safe to rule out typhoid fever when the malarial variation is found, especially when the disease is of some duration, but in a gradually developing fever the absence of a marked increase in the large mononuclear cells during the first week speaks against malaria and suggests typhoid fever A differential count of the leucocytes is not a difficult procedure and, in fact, can be done at the same time that one is searching for the plasmodium in a stained blood smear by counting and classifying the white cells as one goes over the field

The anemia of malaria is of some importance in diagnosis, as it is an early symptom, and in severe estivo-autumnal infections there may be a destruction of 1,000,000 cells per cm in one paroxysm The regeneration of the cells is rather rapid, and in the tertian and quartan types the count may be restored before the next rigor, and the anemia only occur after a long series of chills The hemoglobin suffers more than the red cells and returns to normal more slowly

Therapeutic Test—"An intermittent fever which resists quinin is not of malarial origin," Osler Numerous clinical experiments have demonstrated that the tertian and quartan forms of the parasite are peculiarly susceptible to the action of quinin, and a common experience in my hospital service has been to put a stop to all subsequent chills by the administration of ten grains of quinin four or five hours before an expected chill Of course, it does not prevent this chill, but the drug is in the blood in sufficient quantity to destroy most of the young hyaline forms produced by segmentation at the time of the paroxysm The estivo-autumnal type of infection is more resistant to the action of quinin and it may require three or four days to sweep most of the organisms from the blood That this form of malaria is quite amenable to treatment, however, is well demonstrated by Carter's[5] experience with over 200 cases of estivo-autumnal fever in the canal zone at Panama His patients are given thirty grains of quinin a day and show an average duration of fever of 52 hours and an average stay in the hospital of five days Next to the examination of the blood, the therapeutic test offers the most convincing proof that the disease at hand is malaria, and if the symptoms do not promptly abate with the proper exhibition of this drug one may be certain that he is dealing with a condition other than malarial fever It is true that doubt may arise in mild cases of some of the maladies mentioned below from which the patient recovers from the rest in bed and the general measures employed in spite of the quinin!

SYMPTOMATOLOGY

The clinical forms as given by Osler, include first, the regularly intermittent fevers, the tertian and quartan types with the quotidian fever, due to a double infection with the tertian organism, second, the irregular, remittent, or continued fever, the estivo-autumnal type, which may be combined in a double infection with the tertian parasite, and, indeed, cases are on record in which all three forms of parasites have been demonstrated, third, pernicious malarial fever, which is always associated with the estivo-autumnal parasite, and fortunately quite rare in temperate climates It is in this form that one meets with the real "congestive chill" or "yellow chill" and occasionally with hemoglobinuria, fourth, malarial cachexia, characterized by anemia and an enlarged spleen, the result in cases frequently exposed to infection over long periods of time and not thoroughly and energetically treated

DIFFERENTIAL DIAGNOSIS

There is rarely any doubt in one's mind when dealing with the regularly intermittent fevers The acute onset without prodromal symptoms, the sharp rigors occurring with remarkable regularity, and the prompt disappearance of all symptoms on small doses of quinin give rise to a clinical picture that is at once appreciated The estivo-autumnal infection, however, may run its course without definite paroxysms or may assume atypical forms and is most often diagnosed as typhoid fever Experience in many cases at the Johns Hopkins Hospital have shown that it is impossible to distinguish these cases without a blood examination It should be emphasized that this form of paludism is not at all uncommon in this climate, and it is of the utmost importance to recognize it Pernicious malaria, in which thrombi of parasites may occur in the cerebral or mesenteric vessels, causing the so-called comatose and algid forms of the disease, may pass as meningitis, uremic coma, dysentery, yellow fever, or even Raynaud's disease (case with superficial gangrene) Malarial cachexia must be differentiated from pernicious anemia, leukemia, splenic anemia, Hodgkin's disease with splenic involvement, etc It is only by a thorough study of the blood that the diagnosis can be reached in these atypical cases, and the discovery of a single crescent will give indication for most vigorous treatment

The error is more often made on the other side, however, and the number of human ills placed in the category of "malarial fever" is legion As a result, the municipal health is jeopardized by the infectious diseases that fail to be recognized, precious time is wasted in establishing the proper course of treatment for the case, the unfortunate patient is dosed with cinchona *ad nauseam* the prognosis is in doubt, and naturally both the victim and the physician are dissatisfied It is with some of these conditions that this paper has to deal They are chiefly as follows

Typhoid Fever—That this disease is frequently diagnosed as malaria must be apparent to anyone who looks into the statistics as to the cause of death published by various health boards throughout the country One reads with astonishment in the U S Census Report for 1890 that in Brooklyn the deaths from malaria for the preceding six years aggregated 1,413, while only 1 002 deaths were attributed to typhoid fever during this same period[6] At the same time Brooklyn was credited with having a remarkably low death rate from typhoid fever Now, any reasonable physician must admit that a death from malarial fever is a rarity north of Mason and Dixon's line, and much the same may be said of this locality A study of the conditions in Richmond however, is very interesting The reports of the health de-

4 Johns Hopkins Hosp Rep vol. v

5 Dr H R. Carter U S Marine-Hosp Service, personal communication.

6 Osler Med. News, Nov 23, 1895

partment in this city for the twenty years ending 1905 give the following total number of deaths as turned in for these two diseases

Typhoid fever	768 fatal cases
Malarial fever	282 fatal cases

Thus there were more than one-third as many deaths reported from malarial fever as from typhoid fever In addition, during these same twenty years there were 79 deaths reported as due to "intermittent fever" and 29 fatal cases of "remittent fever" Add these to the number of fatal cases of malarial fever and we have a total of 390 deaths ascribed to malaria, intermittent and remittent fever, or more than half the number of fatal typhoid cases As an evidence that these statistics are not the work of a passing generation of physicians, but are dependent equally on the diagnostician of the present day, it might be well to cite the record of Richmond's health board for the one year 1905, which shows

Typhoid fever	28 fatal cases
Malarial fever	24 fatal cases

Such figures as these would seem to make it imperative, as some writers have previously suggested, that our health boards examine very closely into all deaths reported as due to malarial fever

Failure to recognize a case as typhoid fever may be due to the occurrence of chills, which, it must be remembered, are not uncommon in this disease In the first place, typhoid fever may set in with shaking chills This happened in 13 out of the 79 cases treated at the Johns Hopkins Hospital during the year 1894[4] In two cases there were several severe rigors, in three cases there were two, while in eight the rigor was single Chills may also occur[4] at the onset of a relapse, as a result of treatment especially following the use of antipyretics at the onset of complications, as pneumonia or femoral thrombosis, and chills may be present throughout the course of the disease associated with sweats, the so-called sudoral form How often may chills be due to a concurrent malaria? This brings up the question of typho malarial fever as a clinical entity, which will not be discussed in this paper Suffice it to say that the health board reports for Richmond show the return of 215 fatal cases so diagnosticated from the years 1887 to 1900, inclusive After 1900 all cases reported under this head have been included under typhoid fever in accordance with the International Classification of the Causes of Death, adopted in that year It is not to be denied that these two diseases may co exist in the same patient, as was shown by Gilman Thompson[7] at the meeting of the Association of American Physicians in 1894, as in his cases the parasites were actually demonstrated in the blood These cases must be excessively rare however, as Osler[8] reports 829 cases of typhoid fever in which examination of the blood revealed the plasmodium only once

Typhoid fever at its height is a continuous fever, and the temperature curve rarely shows daily variations of more than a degree. Malarial fever, on the other hand is marked from the outset by remissions of a grade not seen in the early weeks of typhoid Say what one will however, estivo-autumnal malaria may simulate enteric fever very closely and it is just in these cases that the diagnostic importance of a blood examination comes in The practitioner should be able to exclude malaria and in most states there are city or state laboratories where a specimen of blood may be sent for a Widal test A reasonable reliance may be placed in the therapeutic test, but if distinct results are not produced at the end of a week it is worse than useless to continue dosing the patient with quinin Dr Osler[8] expresses it admirably when he says "Learn to suspect typhoid fever, and not malaria, in every case of fever of six or seven days' duration, particularly if it resists the action of quinin For too long you have employed the Anglo-Saxon method of procedure, and in a given case have assumed innocence of anything so serious as typhoid until in the onset of some serious symptom the guilt was only too evident It is high time now that you adopt the Gallic usage, and regard every case of continued fever as guilty, that is as a typhoid, until the contrary be clearly demonstrated"

Pulmonary Tuberculosis—Fever is often the initial symptom in pulmonary tuberculosis especially in the more acute cases It is either remittent or intermittent continued fever being unusual except in some cases of tuberculous pneumonia The similarity between the temperature curves of phthisis and malaria is sometimes very striking Not long ago there was a young woman under my charge with acute tuberculosis of the lung whose daily variation in temperature was over seven degrees—96 to 103—for nearly two weeks Special emphasis should be laid on the fact that tuberculosis may set in with shaking chills, fever and sweats, and combined with this there may be few, if any, physical signs In such cases consumption may not even be suspected until at the end of several weeks, during which time the malady and perhaps the patient have been quite refractory to large doses of quinin, a beginning cough or even an hemoptosis may put the practitioner on his guard On the other hand, malaria may be accompanied by a pretty marked bronchitis, and a distressing cough may take the place of the chill, as in a recent patient of mine, during the paroxysms So in many cases the correct diagnosis can be reached only by a careful examination of the blood and sputum

Pyelitis—Infections of the pelvis of the kidney as well as certain other inflammations of the genito urinary tract, are probably more often mistaken for malarial fever than any other condition The insidious onset without pain or local symptoms, the characteristic intermittent or remittent temperature line and chills occurring with peculiar regularity, all suggest malaria most strongly The rigors in such cases are probably associated with a temporary blocking of the ureter drain either by a calculus or by inflammatory products, as the urine during the fever may be clear and free from pus, while at the termination of the paroxysm turbid urine loaded with pus is voided It seems very strange that these forms of pyelitis associated with fever rarely cause any symptoms even when the disease is extensive Palpation may reveal an enlarged and tender kidney, but not necessarily so In contrast to malaria there is usually a leucocytosis of moderate degree 12 000 to 20 000 the blood does not show the plasmodium while one or two urinary examinations usually puts one on the right track

Chills and high fever following urethral instrumentation is an exceedingly interesting condition not often however confused with malaria as it occurs soon after the local manipulation Chills and intermittent fever may ensue on the passage of a renal calculus

Septicemia and Pyemia—Originating not infrequently from an insignificant focus, which may not be

7 Trans Assoc. Am Phys vol ix.
8 Osler N Y Med Journal, Nov 4 1899

discovered, these serious conditions pursue a course closely resembling malarial fever While septicemia has often but one initial chill and then runs a more or less continuous fever simulating typhoid, which in itself is a septicemia, pyemia, on the other hand, has as its cardinal symptoms irregular fever, chills and sweats The diagnosis of these infections from malarial fever is almost always suggested immediately by such a simple measure as a leucocyte count which shows a distinct increase in the number of colorless corpuscles Of course, every means should be employed to locate, if possible, the initial lesion Cases following a wound, surgical operation or child-birth are readily recognized, but the process may originate in the tonsil or accessory nasal sinuses, may follow gonorrhea or a prostatic abscess, or occur in several of the following conditions which, because of their importance, are taken up separately

Acute Endocarditis—Under the title, "The Pseudomalarial Types of Infective Endocarditis" Coleman,[9] in an excellent article, shows a good many temperature charts illustrating the following pseudomalarial curves double quotidian, quotidian, tertian, quartan, and mixed types He cites several illustrative cases, states that the paroxysms may be identical with those of malarial fever, presenting cold, hot and sweating stages, with fever-free intervals, in which the cold stage may be accompanied by a prolonged, hard chill As is well known, an acute process may attack the heart valves and give rise to no physical signs or symptoms until broken compensation ensues In both malaria and acute endocarditis the long-continued hemolysis results in the deposit of pigment in spleen, liver and bone-marrow so that postmortem it is unsafe to attempt to distinguish malaria from septic processes merely on the gross or microscopic appearance of pigment in the viscera This author concludes that the only reliable method is the demonstration of the malarial parasites in cases of this disease and their absence in septic processes In nearly all other respects the pathologic anatomy of pernicious malaria may be closely reproduced by septicemia

Liver Abscess—Suppuration within the liver is most frequently secondary to amebic dysentery, but may follow traumatism or occur as a part of a general pyemia, or as the result of foci of suppuration in the territory of the portal vessels As regards symptoms, the hepatic abscess may be entirely latent, but as a general rule there is pain associated with fever and an enlarged liver The temperature is usually intermittent and rigors are not uncommon, which, associated with the sweating, form a clinical picture not unlike malaria In the case of the amebic abscess the patient may give no history of dysentery,[10] but a careful examination of the feces generally reveals the protozoon The blood does not show the malarial parasite, but may exhibit an eosinophilia, Billet[11] having reported 32 cases in which this was a constant feature Most of his cases showed from 5 to 12 per cent of eosinophiles, with one case running as high as 47 per cent My experience does not entirely confirm this, as my notes on 14 differential counts in cases of amebic dysentery occurring recently in the wards at Johns Hopkins show that the eosinophiles were less than 4 per cent in seven, and the case with the highest number had only 9 8 per cent. Amberg[12] found a slight eosinophilia in some cases of amebic dysentery in children, in others none As a rule, there is an increase in the number of leucocytes in abscess of the liver, but a certain proportion of the cases fail to show it,[10] so that absence of leucocytosis does not aid in the differential diagnosis

Gall Stones—One form of cholelithiasis so frequently simulates malaria as to be worthy of special notice This is obstruction of the common duct with the stone lodged in the diverticulum of Vater and exhibiting a ball-valve action This is apt to give rise to ague-like paroxysms, chills, fever and sweating, the so-called hepatic intermittent fever of Charcot. I have seen several such cases giving a history of intense rigors over periods of weeks and months with more or less irregularity, fever often mounting to 103 or 104, that had been treated continuously with quinin, in which Dr Halsted operated and confirmed the diagnosis of stone in the common duct. The most careful search failed to reveal any malarial organisms in these cases The patients all showed more or less jaundice which had been considered in the light of the icteroid tint so frequent in severe malaria The pain in these conditions, while sometimes severe and colicky, does not always occur A careful consideration of all the symptoms, the deepening of the jaundice after each paroxysm, the presence of bile in the urine and the absence of the plasmodium in the blood should lead one to the correct diagnosis

Among other diseases that may run irregular and intermittent fevers should be mentioned the severe anemias, leukemia, and especially Hodgkin's disease in which periods of pyrexia may alternate with periods of normal temperature, or there may be a daily rise of three or four degrees, sometimes with a chill and sweat. The fever in the early secondary stage of syphilis may assume marked intermittent character and this may also be said of the fever in certain instances of malignant disease In children, milder forms of osteomyelitis, when not attributed to "growing pains," are often ascribed to malaria,[13] and when a child is brought to us with limp paralyzed extremities how common it is to have the mother tell that the whole trouble began with an attack of malaria, when the acute symptoms were really the onset of an anterior poliomyelitis These conditions, and possibly many others, are treated as malaria and will continue to be so diagnosed until the practicing physican realizes that malaria is a real clinical entity, with a well-known and easily found causative agent and with an antidote that is a specific in every sense of the term if properly exhibited

TREATMENT

The subject of prophylaxis will not be dealt with in this paper except in so far as it applies to the individual patient. In all well-directed hospitals every patient whose blood harbors the malarial parasite is covered at night with a mosquito net, at least during the months that the anopheles are present Were this not done ward infections would not be infrequent owing to the habits of this mosquito, which does not migrate, but tends to spend its whole existence within the radius of a few hundred yards This insect bites only at night, and a mosquito bar is not an inconvenience and we would all do well to insist that one be provided in each individual case we treat If it were possible to isolate every case of malaria, including the instances in children that are only too often unrecognized, the disease could be quite eradicated

In the treatment of the individual case emphasis must

9 Coleman Am Jour Med Sci. March 1905
10 Osler Med. News April 12 1902.
11 Comp Rendus Soc de Biol., Paris lviii No 18
12. Bull. Johns Hopkins Hosp., December 1901

13. Johnston Trans. Am Surg Assoc. 1904

be laid on the following points 1 The quinin must be absorbed and enter the blood 2 The drug must be administered until every parasite is destroyed 3 The patient should remain in bed until the temperature reaches normal and remains normal

In order that the quinin be absorbed there are two essential features to which attention may be directed 1 The patient's alimentary tract should be in a condition to favor absorption To this end the bowels must be unloaded by means of a good dose of calomel or blue mass, followed by a saline The diet should consist of soft, easily digested foodstuffs, and as long as there is fever liquid diet alone is preferable 2 The quinin must be given in a soluble form In this connection I should like to cite briefly a rather remarkable case that came under my notice a couple of years ago A man was brought into the hospital in a state of collapse whose blood presented an extreme picture of pernicious malaria, nearly every other red cell containing one or more parasites He died in a few hours in spite of heroic treatment, and at the autopsy was found an ischio-rectal abscess which contained in its pocket-like recess a very large number of quinin pills which had passed through the intestine without being at all dissolved Such an experience as this is certainly striking enough to condemn forever the administration of quinin in pill form Undoubtedly the surest way to give quinin is in solution with a mineral acid, e g, quinin sulphate 5 grains, dilute hydrochloric acid 5 minims, water to 1 dram It is not very palatable, although the acid seems to offset somewhat the bitter quality of the quinin, and I have always found that patients take it without objection The drug may be administered in powdered form in soft gelatin capsules, but it is not an uncommon experience to have them pass entire from the rectum The solubility of the quinin when given in this form is aided by following the dose in a few minutes by 10 minims of dilute mineral acid The best indication we have that the quinin is absorbed is the subjective sensation of ringing in the ears, and if this is lacking we may feel quite sure that the quinin is not in the blood except possibly in certain unusual cases of idiosyncrasy in this regard

The necessity of giving quinin for a definite period after the fever and symptoms have disappeared is not always sufficiently appreciated This fall I have had several patients brought to me who gave a history of chills and fever five or six weeks previously, who had been given quinin for a few days which caused the symptoms to abate, but they have never felt quite well since, complaining chiefly of periodic headache, malaise and occasional chilly sensations, and on examination the blood still showed the plasmodium A good general procedure in the handling of ordinary cases is the following 5 grains of quinin every four hours, or 20 grains a day, for the first five days, then 2½ grains every four hours, or 3 grains three times a day, for two and a half or three weeks In severe cases larger amounts may be given, 30 to 40 grains daily It is generally advisable to give one large dose, 10 or 15 grains, five hours before an expected paroxysm and if this is done there is usually sufficient quinin in the blood to destroy most of the young hyaline forms that are produced by segmentation during the chill But if a case is seen directly after the rigor and another is not expected for two days I much prefer to start the quinin at once as it is undoubtedly true that a certain number of parasites are destroyed by the quinin while still contained within the red corpuscles[14] and the succeeding paroxysm is much modified Let it here be again emphasized that quinin is a specific in malaria, that if it enters the blood in sufficient quantity the fever should disappear in a few days certainly within a week, and I doubt very much if it is possible under these conditions for malarial fever to run as long as thirty days, a remark that is sometimes heard Dr Carter's communication, already mentioned, touches directly on this point, as in over 200 cases of estivo-autumnal fever treated in the canal zone at Panama the average duration of fever was only 52 hours in this severe type of infection

In pernicious malaria every means should be employed to get the quinin into the circulation as quickly as possible The drug must be given hypodermically—or rather, intramuscularly—or even intravenously, and may also be given by the rectum Tyson objects to the hypodermic method, stating that he has had to abandon it on account of the frequency with which it is followed by abscess formation Undoubtedly quinin is very irritating to the tissues, but if the precaution is taken of injecting it deeply into the muscles and not simply under the skin, abscess formation is less often encountered At least, this has been the experience in Panama,[5] where this method is frequently used The bimuriate of quinin, or the bisulphate of quinin and urea, are the two preparations most frequently used These methods of administering the drug are dealt with in most textbooks on the subject

The necessity for absolute rest in bed while actively combating the infection must be apparent to anyone who has tried the simple experiment of treating an ordinary case of tertian malaria by this means alone without the use of quinin at all While by no means the best way to kill off the parasites yet it is surprising to see what Nature can do when aided by rest diet, care of the bowels, and general hygienic measures It is very certain, however, that the rest plus the quinin is more efficacious than either alone

Appropriate means should be employed during the paroxysms to make the patient as comfortable as possible—blankets, hot water bottles and possibly a hot whisky-and-water The judicious use of morphin is often indicated, especially if there is much gastric disturbance A tepid sponge or an alcohol rub is appreciated during the sweating stage

The post-malarial anemia is best treated with some form of arsenic I usually prefer Fowler's solution running up to 10 or 12 minims three times a day, provided the patient takes it well Some prescribe a combination of iron and arsenic in pill form If there is any indication to continue quinin, such a tonic as the syrup of iron, quinin and strychnin phosphate may be given

The whole question of the treatment of such a common disease as malaria is so simple if attention be directed to certain important details that this fact is probably the very reason we turn out so many students from our medical schools each year with only a hazy idea of the subject

110 North Fifth Street.

Sudden Death in Apparently Healthy Infants—C J Bartlett of Yale states, in *Yale Medical Journal* that in cases in which an apparently well nourished baby dies suddenly without evident cause he always expects to learn that it has been fed on condensed milk or some baby food in place of cow's milk and that he is not usually disappointed

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NUTRITIONAL DISTURBANCES IN INFANCY DUE TO OVERFEEDING *

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That overfeeding in infancy is apt to be followed by indigestion is a universally recognized fact The term, however, usually suggests the giving to an infant of a food that is too rich in one or more food elements, or that is unsuitable to age and conditions, or that is given in too great variety and at too short and irregular intervals We have not been sufficiently impressed with the fact that even an appropriate artificial food and one properly adapted to the individual case, can give rise to the profoundest nutritional disturbances when given in quantities that exceed the actual economic needs of the infant In this discussion the term overfeeding will be used in this restricted sense, the giving to an infant of too great a total quantity of good, clean, fresh, unexceptionable, properly modified cow's milk, usually, but not necessarily, at too short intervals

Continental writers have emphasized the danger of overfeeding in this sense for many years Biedert was among the first to teach a doctrine of minimum feeding (*Minimalnahrung*), which called for the smallest amount of food necessary to insure perfect development with normal increase in weight This most desirable minimum daily amount of food he placed at from 150 to 200 grams of fluid per kilogram of body weight, this amount to contain about 80 calories

Heubner determined along metabolic lines the number of calories, per day, per kilogram of body weight, necessary to insure proper development in normal breast-fed babies This so-called energy quotient he found to be about 100 from the third week to the end of the sixth month, a gradually diminishing amount after that time to about 80 or 85 at the end of the first year He established 70 as the approximate energy quotient necessary to maintain a weight equilibrium

Clinical observations, each extending over many months, have been made on breast-fed infants by Feer, Beutner, Budin, Schlossman, Nordheim, Czerny and Keller, Reyer and others, that have all confirmed rather closely the figures set down by Heubner, so that these can be used as a standard

Budin of Paris uses a simpler measure He feeds all of his babies "especially after the fifth or sixth month, or better, weighing 6 or 7 kg, one-tenth of their body weight daily of pure, sterilized, undiluted milk," and claims to have no symptoms of the overfeeding against which he warns so emphatically

In this country, through the teachings of Rotch, Holt and their followers, we have come to think of nutritional needs and overfeeding rather in terms of percentage than of amount Certain standards are set up as guides to the strength of food a child should receive, and these naturally find expression in more or less elastic tables of percentages of different food elements adapted to average healthy infants at various ages Weight is given comparatively little significance, and for conditions other than normal we have most indefinite data

To Czerny and Keller we are indebted for a symptomatology of overfeeding that in its totality, is new and original and is so clean cut and palpable that it alone can serve as a real guide to determine when proper amounts are beginning to be exceeded Their exhaustive and truly scientific work[1] that has appeared only in part has placed the whole subject of infant feeding on as firm a foundation in reason and scientific investigation as that on which any other department of medicine stands Finkelstein has put it none too strongly when he says "When in the future we shall speak of the attainments of scientific pediatrics, Czerny and Keller's work will be placed first, and everyone who wishes to occupy himself in a scientific manner with the problems of infant feeding must find his foundations there" I wish to acknowledge that this paper and our own recent work in infant feeding has been, in a large measure, inspired by this work, and especially by the chapter on *Milchnärhschaden,* a term perhaps most briefly and fully translated by the title of the present paper, a chapter in which they picture a definite and convincing symptom-complex resulting from overfeeding

For some time we have recognized and studied this clinical picture, we have also, during that time, calculated energy quotients in all of our feedings and have been much impressed by the results It seemed to me additionally instructive to study our old cases in this light. I have, therefore, recently gone over the histories of our old cases at the Northwestern University Medical School, as well as over my own private cases, to see what our past habits have been with reference to overfeeding, both from a calorimetric and a clinical or symtomatic standpoint, and from this, if possible, to make a deduction as to the prevalence of overfeeding under present conditions in this country

Our conditions have been rather favorable for such a study In practically all of these cases we have a complete history of the exact amount of certified milk or cream, of definite strength, that was used, together with the exact weighed amounts of other ingredients used in the mixture Our weight record, on our own scales, is quite complete, and the rest of the history as to bowel movements, disposition, etc, sufficiently so for this purpose In nearly all cases the foods were prepared at the diet kitchen—always individually for each case We have, then, all the necessary data for calculating approximate energy quotients We have considered the caloric value of 1 ounce of 4 per cent milk at 21, 1 ounce of 16 per cent. cream at 54, 1 ounce of skimmed milk at 10, 1 ounce of sugar at 120, 1 ounce of cereal water at about 3 It is a simple matter, then, to multiply the number of ounces of each ingredient in the twenty-four-hour food by its caloric value, to add the products, divide by the number of pounds the baby weighs, and multiply the result by 2 1/5 to reduce from pounds to kilos The end product is the energy quotient By caloric value is meant the number of large calories, the latter being the universally recognized unit of measure of food value as expressed in terms of heat production and representing the amount of heat required to raise 1 kilogram of water from 0 C to 1 C

The dispensary babies were fed by a number of different instructors connected with the department of pediatrics Until recently we all used the percentage method We have however, gradually come to look on fats with that feeling of caution that pervades our own literature (Holt, Southworth, Jacobi, etc), and I believe that all of us fed considerably under the usual amounts rather than above them, especially of fat In the last year most of us have stopped using cream altogether and have used only milk dilutions with the addition of carbohydrates I believe, then, that I can assume that our

* Read before the Chicago Medical Society Nov 28 1906

1 Des Kindes Ernährung Ernährungsstörungen und Ernährungstherapie.

conditions were representative, or at least not an exaggeration, of what is being done in this country by those who use these methods only

I was convinced before looking over our records that overfeeding was a factor in our results, but after studying them, *I am positive that, in our past, overfeeding has been a factor in the production and maintaining of nutritional disturbances in infants that towers above all others*

It seemed impossible to tabulate these cases and have the results of any more value than are general statements, so I have not attempted it. As far as calorimetric overfeeding is concerned, according to Heubner's standard, it can safely be stated that all of our cases were overfed ultimately, except those that were, at the time, suffering from some acute disorder By overfeeding is not meant simply the exceeding of Heubner's energy quotient of 100, but rather using energy quotients of 120, to 150, to 200—in one case, fed by a physician not connected with the dispensary, who had had peculiarly valuable experience in infant feeding by the percentage method, an energy quotient of 330 was given for two weeks

SYMPTOMS OF OVERFEEDING

As to symptoms due to overfeeding, it can be said with equal certainty that they were present in the great majority of our babies, at some time, during the period that they were under our care So typical and uniform are these symptoms that we associate with overfeeding that they form a clean-cut, easily recognized clinical entity Individual cases differ from the well-marked type only in the number and the degree, rather than in the character of the symptoms, that make up this symptom-complex Many of our cases gave only a few slight manifestations of trouble that had little or no bearing on the general condition of the child, in others there was every evidence of the profoundest nutritional disturbance

An infant that is overfed becomes restless, often most strikingly shown by broken and restless sleep at night At the same time it becomes constipated in a very characteristic manner, the bowel movements that were yellow in color and were soft and moist, become pale gray, hard and dry, will not mix with water, and are of the color and consistency of putty—so that they will roll from the diaper without leaving it soiled The odor is strong and suggests decomposition The urine has commonly a strong ammoniacal odor and easily produces irritation of the skin

At the same time it is noticed that the child gives evidence of a fundamental disturbance of nutrition It becomes pale, its tissues lose their tone, the abdomen becomes soft and moderately distended with gas The child becomes less active, it plays less A striking symptom, often the only one that gives any concern to one not familiar with this picture, is a failure to gain in weight on the same food, or a greater quantity of food that up to this time has produced normal or even abnormal gain in weight. Still more striking is the fact that a continuation of the same amount of food, or of an increased amount, will regularly produce not only a stationary weight, but after a time, a steady loss in weight A further increase in food may again produce a temporary gain often a large one but it only makes surer and quicker the ultimate loss in weight

OTHER RESULTS OF OVERFEEDING

If this course is persisted in one of two results will follow The child finally presents the picture of atrophy or marasmus This we see not rarely in the pale constipated, marantic baby that gives the history of having had a stationary weight, or steady loss in weight for months, in spite of the fact that it has taken enormous quantities of cow's milk and has had no diarrhea or evident digestive disturbance

The other result is the acute gastrointestinal catastrophe that may occur at any time in this course and that is characterized by vomiting, diarrhea prostration, loss in weight, often by fever, and usually, by the inability to take more than the smallest amounts of cow's milk, sometimes for many weeks This condition we have seen more commonly in weaker children with poorer digestion, especially in those who were rapidly or excessively overfed, while in more robust children with better digestion, in whom the overfeeding was a more gradual process, though excessive there has been more of a tendency to the typical chronic course outlined above In weaker children one often sees one catastrophe follow another, especially in hospital cases the only progress being made during the period of low feeding generally recognized as necessary after such an upheaval, while in the stronger children the severest symptoms of overfeeding may be present for months before such a catastrophe occurs, if it occurs at all

In many of these more chronic cases there is evidence of rickets, with the train of nervous symptoms that accompanies that disease Two other symptoms very frequently appear at some time during the period of overfeeding One of these eczema, has been very frequent in those of our cases that have shown other well-marked symptoms of overfeeding especially the characteristic constipation It varies from the small, rough reddish spots in the cheeks that are so well known to the most extensive and intractable involvement of the cheeks, forehead, scalp, chest and back, and other parts of the body

The other symptom alluded to is anorexia Loss of the normal keen appetite of infancy, so that the child needs to be coaxed to finish its bottle, is very common in these cases that are well marked, but a refusal to take more than an ounce or even less, at a time, is characteristic only of the graver cases, and then often forebodes a catastrophe We have come to look on this symptom as due to overfeeding in practically all cases in infancy in which there is not some other evident acute, or chronic disorder There is at present at Wesley Hospital a child of 17 months weighing 16 pounds in whom an increase of food from 26 ounces of milk, 10 ounces of barley water, 1 oz of cane sugar to 30 oz of milk and 6 oz of barley water produced in one day a florid eczema of chest and back spreading later to the cheeks and scalp, and within five days, loss of appetite restlessness at night, fever and constipation, with hard, dry, gray bowel movements

While most of our babies gave some evidence of overfeeding and many of them had well-marked manifestations, such as constipation pallor, restlessness eczema, stationary weight etc there were very few in whom the final outcome was wholly bad The ultimate picture of marasmus, of course came to us in its finished state and was never produced by us Some of our cases showed undoubted rickets although under satisfactory control throughout In general we considered our results excellent In some cases this was due not so much to our methods as to the fact that these cases can often stand a surprising amount of overfeeding While [illegible] of our [illegible] did well for weeks and m[illegible] [illegible]

of 150, many gave evidence of serious trouble on those of from 110 to 120 or even less Since calculating energy quotients in all of our cases we have seen few, if any, cases that required over 100, and we have usually regretted it if we have exceeded that "unsurpassable amount" (Heubner) In general, we have found the energy quotients of from 100, at the beginning, to 80, or less, at the end of the first year, as a wholly satisfactory working basis as to the approximate amount of food a child should get

FAT THE DISTURBING ELEMENT

There seems little doubt that the disturbing element in this condition is the fat of cow's milk, and that its non-digestion, non-assimilation and the resulting disturbed intermediary metabolism are the cause of this train of symptoms Outside of the negative evidence that proteids and carbohydrate and salts can not produce this picture, there is very positive evidence that fat does The characteristic dry, hard, pale bowel movement has been found to consist largely of the insoluble salts of the fatty acids (*Seifenstuhl*) If the amount of fat is increased all symptoms are increased If the fat is sufficiently diminished, and the other food elements are left undisturbed, or increased, there will be rapid improvement No other result in infant feeding is more striking than the mathematical certainty with which the dry, gray bowel movements of these infants, no matter what their ages, are replaced by characteristic smooth, nearly odorless, curdless, brown, salve-like bowel movements, when they are fed straight, undiluted skimmed milk—a food that is nearly fat free, but contains the maximum amount of proteids and carbohydrates Nor is the general improvement less certain than that of this one symptom

The immediate cause of this condition is probably an acidosis (Czerny and Keller), as shown by increased excretion of ammonia in the urine This is due to the fact that alkalies are withdrawn from the body by the fatty acids produced in the intestines and to satisfy the normal acid products of metabolism ammonia is called on

The following three cases may be cited as typical cases of overfeeding, in which the percentage method was used

CASE 1—Baby F, well developed, strong, healthy baby Birth weight 9 pounds 12 ounces Maternal nursing alone for three weeks, with severe indigestion and considerable loss in weight After the first month fed artificially on cream and whey mixtures, later on cream and milk At four months weighed 13 pounds 8 ounces At five months weighed 13 pounds, a loss of 8 ounces in one month During this month the child had received a food mixture containing fats 3 0, proteid 2 0, sugar 7 0 Seven feedings of 5 ounces each were given at three hour intervals The energy quotient here was about 116 It did not take the food well and would often leave one or two ounces of a 5 ounce bottle Child was rather pale and thin, but muscular and active Cranio tabes well marked. Bowel movements were pale yellow and somewhat dry and offensive During the fifth month a sudden severe diarrhea occurred, with from twelve to fifteen green bowel movements a day It was put on barley water for a short time and milk, later cream, was slowly added Baby now took food eagerly and after the initial loss due to diarrhea and hunger diet, gained one pound in two weeks Soon began again to refuse to take all of the 5 ounces of food, so the food was made more concentrated Fat 4, proteid 2 sugar 7 5 the number of feedings was kept the same as also was the frequency and the amount The energy quotient now was about 137 Child became rather constipated, the bowel movements were pale greenish yellow and offensive but it gained 20 ounces in eighteen days on this stronger food Two weeks later there was no gain in weight, the bowel movements were dry, pale and offensive, the baby was pale, and refused food more and more Finally it would take only an ounce or two at a time, and was losing in weight In three months it had gained only 1½ pounds The mother then, on her own initiative, fed the child potato, bread and gravy, porridge, cracker, soup, etc., and stopped coaxing her to drink milk, the child soon taking less than a pint a day There was immediate improvement The child was happier and slept better, bowel movements became normal, and the child gained a little over a pound a month for four months At eleven months the child weighed 19 pounds Still rather thin and pale, but marked improvement over former condition Only very slight evidence of rickets

In this case the most serious results of overfeeding were avoided by the mother unconsciously meeting the two therapeutic indications, decreasing the milk and increasing the carbohydrates

CASE 2—Baby B, weight 11 pounds at birth, maternal nursing insufficient Was rather underfed for two months, with stationary weight, for the next four months it gained steadily about 6 ounces a week on cream and milk mixtures During the last two months of this time the child was badly constipated, one or two hard, dry, smooth, pale yellow bowel movements a day, offensive in odor Eczema was first noticed about this time on cheeks, and later about the ears, then on the forehead and scalp, with one or two small spots on the body, it was variable in intensity Child always rather pale, but very active and a good baby During this time the food had a percentage never stronger than, fat 3 6, proteid 2 0, and sugar 6 5, but the energy quotient was from 160 to 165 The cream was diminished and the milk increased so that at nine or ten months the child was practically on about 40 ounces of whole milk, with the energy quotient under 100 Weighed 19 pounds at nine months, and the general condition was excellent The eczema, which in this case was the chief symptom had slowly disappeared, and was practically gone at nine months

CASE 3—Baby O, a typical case with all the classical symptoms, weighed 7 pounds at birth, was wet nursed five months when it weighed 16 pounds 4 ounces Had been on milk and cream mixtures since then At seven months the food mixture consisted of fat 3 0, proteid 1 5, and sugar 6 0, with an energy quotient of 86

At eight months the child weighed 18 pounds and the food mixture was Fat 4 0, proteid 2 0, and sugar 7 0, the energy quotient being 128

At nine months Fat 4 0, proteid 2 8, sugar 6 0, with energy quotient 130

At ten months Fat 4 0, proteid 3 0, and sugar 6 0, energy quotient 130

At eleven months the child weighed 18 pounds 14 ounces—a gain of 14 ounces in three months, the energy quotient was 128

When one year old the child weighed 19 pounds 8 ounces The food was milk 40 ounces, sugar 1 ounce, with an energy quotient of 108 During the last few months this child has had no acute illness Has been out of doors almost constantly Bowel movements have generally been rather dry, grayish, often nearly white and offensive, typical *Seifenstuhl* Has had slight eczema for some months, especially recently, is rather pale does not drink well, and often leaves an ounce or two of food When thirteen months old had for several days refused bottle more and more, and finally would not take it at all The eczema was well marked, and vomiting and diarrhea now set in Baby was put on barley water for eight days, then milk was added slowly to 40 ounces At sixteen months of age the child weighed 20 pounds 10 ounces, a gain of 10 ounces in two months In the last few months the child had taken a daily mixture of milk 40 ounces sugar 1 ounce, in addition to some carbohydrate food granos, flaked wheat, etc. During the greater part of this time the stools had been hard, light colored and dry

The child at sixteen and one half months was rather pale, the anterior fontanelle measured 1 inch across, the head was rather large and square, and the tissues soft. The ribs were

slightly beaded and the costal borders somewhat flared, the abdomen was soft and moderately distended.

This child lived under very favorable hygienic conditions, was out of doors nearly all of the time, was only moderately, but persistently, overfed, and yet developed mild rickets and gained only 24 ounces from the eighth to the eleventh month, or 2 pounds 10 ounces from the eighth to the sixteenth month

TOO LARGE AMOUNTS VERSUS TOO LARGE PERCENTAGE

So far cases have been cited in all of which high percentages of fat have been used—only once a little above 4 per cent, in the rest 4 per cent or under In a paper read before the American Pediatric Society in May, 1904,[2] Holt cites five cases resulting from too high percentages of fat (5 to 7+ per cent) These he details under the following headings

HOLT'S SERIES—CASE 1—Overfeeding with high fat, rapid increase in weight and progress in development till 8 months old, then general convulsions followed later by tetany, laryngismus, fatty liver (?) Recovery after three months' illness

CASE 2—Prolonged feeding with high fat, notwithstanding which constipation and the development of moderate rickets followed by acute disturbances of digestion with repeated convulsions

CASE 3—Overfeeding with high fat, convulsions

CASE 4—Habitual vomiting aggravated by high fat, serious gastric catarrh produced, finally cured by stomach washing

CASE 5—Feeding with high fat, eczema, habitual constipation and finally habitual vomiting

So striking is the similarity of this symptomatology to that of the cases I have just cited that there can be no reasonable doubt as to an identical cause, i e, too much fat This excess Holt repeatedly states in terms of percentages as if the essential point were too high a percentage of fat—not too great an amount It may seem a trivial matter to point out this difference of viewpoint—and yet right here is the very kernel of the matter—the essential difference between feeding by a percentage method and a method that determines the amount of food that should be given That these digestive disturbances are not due to too high percentages of fat *per se*, can be demonstrated with the ease and certainty of a laboratory experiment by any one who will feed a number of babies on low milk dilutions in excessive amounts, they will get the identical symptoms that Holt has described and that are undoubtedly due to too much fat

A year ago I started about a dozen babies on simple milk and water, or milk and cereal water dilutions (1 to 3, to 1 to 0), with about 5 to 7 per cent sugar Most of these babies were sick and required a preliminary one or two days' hunger diet Such immediate results in the form of smooth, rich yellow, well-digested bowel movements I had never seen before Gradually all those assisters in proteid digestion from alkalies to peptonization were dropped without any appreciable difference, except, in some cases a beneficial one These babies were not constipated, they gained rapidly in weight from the start—there was not that long anxious wait in the sicker cases that we were accustomed to in those we fed on whey and cream and cereal water mixtures One after the other however these babies did become constipated often very much so with pale hard, dry bowel movements Some failed to gain after the first rapid gain They became restless and did not sleep well at night Many had eczema and some would not take all of their food Some of them gained steadily and well and seemed in good condition Practically, all were ultimately constipated except those in whom sudden severe attacks of diarrhea broke out often without any apparent reason We had been taught, and had ourselves taught that simple milk dilutions would "invariably cause constipation," so this result was not unexpected, and the other symptoms were considered secondary to it In certain cases I added cream and found, to my astonishment that the condition was not only not relieved, but often made much worse

I then began to estimate energy quotients in all cases and found that all of these cases had been overfed being given usually energy quotients from 120 to 170 during the period of eczema and maximum constipation or just before the catastrophe Since we have calculated energy quotients in every case constipation has given us comparatively little trouble and the other symptoms of overfeeding no longer occur We have heard much of "fat diarrhea" in the last few years Fat constipation deserves at least an equal place in our nomenclature We have come to look on fat as the constipator—and the one condition in which we have never seen constipation is the use of straight, skimmed milk, the maximum proteid and minimum fat food A single case from this series will illustrate what has been said

CASE 4—Baby E born March 14 Weight 10 pounds (?) and was wet nursed one month, but lost in weight, so was then fed on modified milk Was first seen May 12, when it weighed 8 pounds 12 ounces Had had a good deal of colic with three to four bowel movements daily, but was now constipated Started the child on barley water for twenty-four hours, then 5 ounces of milk was added daily until it received the following Milk 15 ounces barley water, 25 ounces, sugar 2 ounces The energy quotient was 154 The composition of the food was Fat 1 5 proteid, 1 5 and sugar 6 0 Eight 5-ounce feedings were given daily at three-hour intervals

May 5 Weighed 9 pounds 12 ounces, a gain of 1 pound in one week! The baby was well in every way, so the food was continued *This enormous gain in weight is characteristic of early rapid overfeeding and we now consider such a gain an imperative indication for reduction in the amount of milk unless the energy quotient is very low*

May 30 Weighed 10 pounds 3 ounces, had two or three bowel movements a day yellow, not offensive but a little too hard and pale, so that baby grunts a great deal in passing them Slight eczema The same food was continued

June 9 Weighed 10 pounds 13 ounces Food the same energy quotient, 123 Two bowel movements daily, which were whitish, dry, formed and offensive Eczema increased spreading to chest and back as well as face On account of the small gain of 2 ounces in one week, 2 ounces of milk was added and three days later 2 ounces more The food mixture was Milk 19 ounces barley water, 21 ounces, milk sugar 11 ounces giving an energy quotient of 126 The food strength was Fat, 1 9 proteid 1 9 and sugar 6 0 The number of feedings quantity and intervals remained as before

June 30 Weighed 11 pounds 11 ounces a gain of 14 ounces in fourteen days

The increase in food as often happens even when there was no previous gain increased the weight but brought on the catastrophe a diarrhea for ten days For a time there were bowel movements every ten to fifteen minutes of a pale yellow curdled cheesy sour and offensive character Child was restless slept little and cried much

July 3 Baby was put on barley water for two days and the crying stopped and it slept well Five ounces of milk were added with six to eight bowel movements daily [illegible] child was put on barley water for four days longer

July 7 Weighed 11 pounds 6 ounces The addition of milk produced the same bowel condition as before [illegible] attempts to relieve conditions including [illegible] (not fat free), the mother decided to

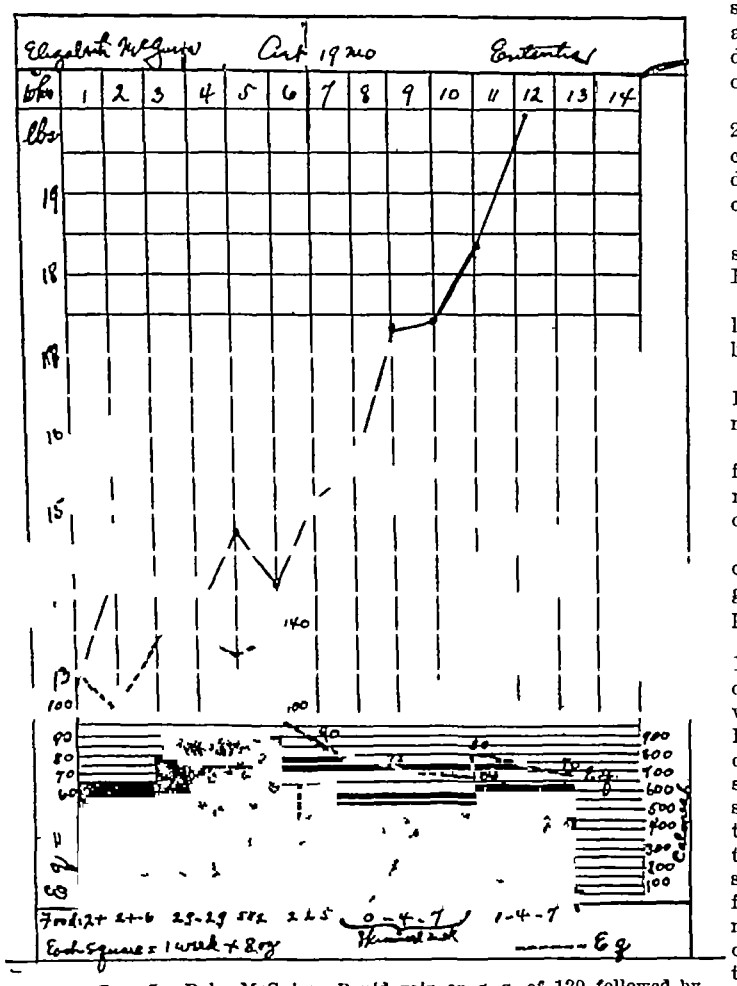
2 Disturbances of Digestion in Infants Resulting from the Use of Too High Fat Percentages.

country and the further history is unknown The child never had 2 per cent of fat, although 3½ months old when the food disagreed, and was typically overfed on 1½ per cent of fat.

The following case had less than 3 per cent of fat at 19 months, but had severe symptoms of overfeeding on an energy quotient of 140 from which she recovered at an incredible rate on less milk—later skimmed milk with very low energy quotient, gaining 5 pounds 14 ounces in 51 days, nearly 13 ounces a week for over seven weeks

CASE 5 —Baby McGuire (see chart)

August 20 Entered Wesley Hospital, 18 months old, had an enteritis of three weeks' standing, was thin, pale, haggard and



Case 5 —Baby McGuire Rapid gain on e q of 120 followed by loss. No gain for 3 weeks on e q of 140 Enormous gain on e q of 66 to 80 In general as e. q is lowered gain is increased, and vice versa Maximum gain of 1 lb 11 oz in one week on e q of about 70 Food at this time Skimmed milk 40 oz cane sugar 1 oz

listless, with eyes sunken and a temperature of 101 F Frequent green, curdy, slimy bowel movements She was given stimulation and placed on cereal water for four days, then milk was added three ounces a day

August 29 Weighed 12 pounds 13 ounces, bowel movements had been normal for several days, but had been losing to this time Energy quotient was slowly raised to about 120 Food mixture consisted of Milk, 25 ounces, cereal flour, malt, water, 23 ounces, cane sugar, 1½ ounces Six 8 ounce feedings were given daily at three-hour intervals

September 5 Weighed 14 pounds 4 ounces, a gain of 23 ounces in seven days Food was the same, with an energy quotient of about 100

September 14 Weighed 14 pounds, with food as before, bowel movements were normal On account of loss, the food was increased to milk, 35 ounces, barley water, 13 ounces, cane sugar, 1 ounce, fed as before, with the energy quotient 140

September 21 Weighed 14 pounds on same food One bowel movement daily, several days none, dry, pale, gray and hard Child had not slept as well as before and showed eczema about the chest

September 26 Weighed 14 pounds 12 ounces Had gone home The bowel movements were hard and dry, so that the child played with one, as with blocks, the eczema was worse The same food mixture was given in five 10 ounce feedings at four hour intervals

October 3 Weighed 14 pounds 1 ounce Child had not taken food well since she went home and will only take a few ounces at a time Had five or six bowel movements daily, always gray or whitish, these were at times hard and formed, again soft and cheesy Never green. Child was cross and peevish and restless at night, but had no fever The milk was cut down to 20 ounces, barley water, 20 ounces, cane sugar, 1¼ ounces, giving an energy quotient of 98

October 10 Weighed 15 pounds 3 ounces, a gain of 1 pound 2 ounces in eight days Had not been cross since the food was changed and took it well almost at once Slept well and the diarrhea had stopped, but bowel movements are still a mass of whitish curds, the rest pale and yellow

October 13 On account of the curds was put on straight skimmed (centrifuged) milk, 40 ounces, sugar, 1 ounce. Energy quotient of 75

October 24 Weighed 15 pounds 10 ounces Two good, yellow, normal bowel movements daily, no curds two days after being put on skimmed milk, the same food continued

October 31 Weighed 17 pounds 5 ounces, a gain of 1 pound 11 ounces in one week. Energy quotient 66 Bowel movements normal

November 7 Weighed 17 pounds 7 ounces Still on the same food On account of the small gain child was put on whole milk, 10 ounces, skimmed milk, 30 ounces, cane sugar, 1 ounce Energy quotient, 80

November 14 Weighed 18 pounds 5 ounces, a gain of 14 ounces in one week Child had perfect digestion, good color, good disposition and slept well Is getting solid, laughs and plays

November 23 Weighed 19 pounds 15 ounces, a gain of 1 pound 10 ounces in nine days, on the same food Energy quotient, 70 General condition excellent Since this child went home it has received a small amount of additional food I asked the mother many times as to just what this consisted of She always stated positively that the child had one thin slice of bread about 2 inches square and a half cup of beef soup daily,, and, every other day, she chewed a piece of meat the size of one half a finger This child had been so sick that the mother had given her up, the latter had been cautioned so often and so hard against giving too much food, and her faith in the last milk was so implicit that I believe her statement is accurate To make doubly sure I asked the nurse in charge of the diet kitchen to go to the home and investigate the matter She was equally convinced that the child was getting no more than the mother stated. For a study in actual, rather than relative energy quotients, the caloric value of these could be added to the milk.

Such enormous gains are not so alarming nor do they carry the same therapeutic indication, as when whole milk is given, especially in excessive amounts The offending fat is not present in sufficient amount to cause trouble

From all that has been said I believe the inference is justifiable that overfeeding to the point of producing well-marked symptoms is not only widely prevalent in this country, but the rule Our present methods, especially the percentage method, must then be inadequate to prevent this If by one method—that of using simple milk dilutions with the addition of carbohydrates, and with no definite check on the total amount to be given, a 7 months' old child among our cases, whose food is in-

creased from 10 to 15 ounces of milk can develop extensive eczema, restlessness, typical constipation, later diarrhea fever and loss in weight, then this method alone is not so accurate as it would be if combined with a procedure that would tell us in advance that that child's energy quotient was being sent up from a dangerous height of 130 to a disastrous one of 152 And if a "schedule for an average healthy infant (Holt) of 6 months calls for a fat 4, proteid 2, sugar 7 mixture of 30 to 48 oz then that schedule is not even approximately safe in itself when it permits us to go from a proper energy quotient of 90 to a decidedly dangerous one of 145 if our healthy child weighs 16 pounds, as it ought to These tables uniformly recommend excessive amounts and too short intervals that must lead to overfeeding unless we are familiar with the above picture of overfeeding and have had an unusual experience The percentage alone is an unreliable and irrational check even in the healthy child If we could have our cases under ideal control at all times we might be satisfied with recognizing symptoms of overfeeding as they arise But with our conditions, especially in those of limited experience, something safer and more tangible is necessary—something that will forestall symptoms rather than permit us to recognize them We have become convinced that in our feeding cases determination of energy quotient is simply indispensable Those of us who have adopted it have become enthusiastic over it as we have over no other procedure in infant feeding It is this point that I wish to emphasize especially, that this determination of energy quotient is not merely an interesting study in physiology, but an intensely practical procedure of the greatest value not alone to the scientific pediatrician, but to any man who feeds babies and wants to be sure of results It alone enables him to tell approximately how much food his baby really needs, and by keeping this in mind, and departing from it only when clearly indicated, he will avoid on the one hand a prolonged underfeeding that is by no means uncommon and, on the other hand, a still more disastrous overfeeding

It is true that caloric value represents only one function of food, that of heat production It is equally true that in our overfeeding we have to do with a real milk overfeeding and that the amount of milk, and not the caloric value, would perhaps be the surest guide to the prevention of this symptom-complex In a child at Wesley of 17 months and weighing 16 pounds that has been mentioned before, a change of milk from 26 oz to 30 oz, but with an actual lowering of energy quotient from 96 to 90, due to lessening of sugar and barley water, produced nearly all of the symptoms of overfeeding within a few days And yet these symptoms would doubtless have arisen with less increase of milk if the higher energy quotient had been maintained These are theoretical considerations For practical purposes the method advocated is amply sufficient and the most desirable one so long as we are all using well balanced but widely different food mixtures and need a common measure

It need hardly be mentioned that this method is not to be used to the exclusion of other things To feed a baby one needs all the help obtainable from every source The baby itself must be seen it must be weighed regularly and accurately its disposition must be inquired into its bowel movements must be seen not alone described by the mother the actual preparation of the food must be supervised Nor is this method applicable only to the simpler milk dilutions, plus carbohydrates, that we use Its use is indicated nowhere so much as in the use of high fats in the conventional percentage method, for obvious reasons Such indications for increase of food as apparent hunger, restlessness, failure to gain or loss in weight, or mere lapse of time, need hardly be discussed after what has been said

The treatment of this condition, after it is present, is more or less evident from its pathogenesis In general the fat must be reduced and the carbohydrates increased to take its place In milder cases it is enough to do only the former, together with lengthening the interval to at least four hours In severer cases the milk must be greatly reduced and a gruel or flour water added If this is not sufficient to produce normal bowel movements and gain in weight, more sugar must be added, either as cane sugar, or preferably, according to Czerny and Keller, as maltose Milk sugar has not shown itself serviceable clinically To meet this one indication of overfeeding with milk Keller's *Malzsuppe*[3] is intended This or another combination of milk, flour and cane sugar or maltose, modified to meet the individual conditions, is best kept up for a number of weeks because these children are not readily lead back again to normal amounts of milk The milk is then gradually increased and the carbohydrate diminished until the usual milk modification is again reached Rapid improvement and ultimate cure are the rule

We are handicapped in not having a desirable maltose or a serviceable malt preparation, in this country The ordinary malt extracts can not be used in large amounts on account of their laxative action, and the use of maltose itself is not feasible In some cases we have used for this purpose a well-known "baby food" that is composed largely of maltose, with excellent results

In all of these cases, but especially in the severer ones the most rapid and certain *immediate* improvement is produced by the use of a fat-free milk as we would expect I believe it is a matter of indifference whether this fat-free milk is sweet, i e, skimmed milk, or whether it is buttermilk So uniformly certain is the action of buttermilk in these cases, as in nearly all other digestive disturbances of infancy, that its well-deserved popularity is easily understood, and we can see why Baginski considers its use in dyspepsia for example, as "almost a specific, like antitoxin in diphtheria" After a considerable experience in the use of skimmed milk I am convinced that its action is the same as that of buttermilk, and that in both cases the striking results are due to the fact that we have a nearly fat-free food If this is true then the use of skimmed milk has obvious advantages over that of buttermilk It can be used in practically any strength, and is, of course best prepared with the addition of sugar, and often also of flour, or a gruel so that the absence of fat is compensated by the greater amount of carbohydrate in its place The only objections to the use of skimmed milk in these cases of overfeeding are that it is rarely necessary to eliminate the fat so completely and secondly it is often difficult to return from a fat-free to a fat-rich food in a reasonable length of time Constipation and curds in the bowel movements quite regularly follow the addition of even a small amount of whole milk i e of fat, and the change must usually be made very gradually

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[3] Wheat flour 50 g are stirred up in [illegible] l of cow's milk and run through a sieve In a separate vessel 100 g of Loeflund's Malzsuppen extract is dissolved in [illegible] l [illegible] water The two mixtures are then poured together [illegible] are brought to a boil

Just what part food intervals play in the production of overfeeding is difficult to estimate Of the therapeutic value of longer intervals than the customary two or three hours there can be doubt only in the minds of those who have not tried it If cow's milk does not leave the healthy baby's stomach before the end of 2½ to 3 hours, and much later in the case of the sick one, then it would certainly seem indicated theoretically that the minimum interval should be 3 hours in health and 4 hours in pathologic conditions A considerable and remarkably uniform experience has convinced us that the 4-hour interval is indicated in all pathologic cases and is preferable in all normal cases Besides giving the stomach more rest and making the baby more comfortable, this long interval is a potent factor in preventing overfeeding, for it is manifestly more difficult to put enough food into a baby's stomach to overfeed it if that organ is filled only five or six times a day than if that process is repeated eight or ten times a day

A word as to the ultimate results from feeding less fat This consideration naturally limits itself to rickets and to the prevalent teaching as to its etiology, i e, that these children get too little fat There certainly is at the present time no real evidence that too small an amount of fat is an important factor in the causation of rickets, and there is an ever-increasing conviction that rickets can, and does, develop under our very eyes in spite of the fact that our cases are fed much fat—yes, often because of that fact (Holt and see babies O and F) Moreover, it is far from any one to recommend a small amount of fat The child needs proportionately more of it early in the first year than at any other time in life, but that amount need never exceed an equal amount of proteid that the child can take with ease

CONCLUSIONS

1 Overfeeding is so prevalent in this country that it is the rule

2 Overfeeding is second to no other factor in the pathogenesis of infant feeding

3 Overfeeding presents an easily recognizable, definite symptom-complex

4 The percentage method is inadequate to prevent overfeeding, the well-known feeding "schedules for an average healthy infant" of a given age fostering it by recommending excessive amounts, and, moreover, mere percentage leaves undetermined the amount of food the baby gets

5 To feed rationally and especially to prevent overfeeding it is necessary to know how much food the baby is getting in proportion to its body weight, best expressed in terms of energy quotient

6 The disturbing element in overfeeding with cow's milk is the fat

7 Fat in excessive amounts regularly produces constipation—proteids never do so

8 It is never necessary to give more fat than proteids of cow's milk

9 The interval between feedings should be 4 hours

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Rising by Another's Downfall.—A man may become grasping and avaricious, remarks the *Chicago Clinic*, even in the pursuit of knowledge, but when that avarice begins to work destruction to others, he becomes a menace to the general weal however virtuous his quest No individual in the medical profession has the right to pursue any course for his own benefit which is carried on at the expense of others and without their consent.

CHOICE OF METHODS FOR DILATING THE GRAVID UTERUS

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During the early months of gestation the induction of labor by gradual dilatation is not indicated Circumstances arising which make the emptying of the uterus necessary, demand that this should be done as a surgical operation under anesthesia Dilatation by graduated metal bougies, aided by bladed dilators and followed by curetting and gauze packing form the procedure most available in these cases The indications for this procedure are pernicious nausea with fulminant toxemia, incomplete abortion, and hemorrhage from the uterus caused by or accompanying disease of the ovum Gradual dilatation should be declined in these cases, because of the inefficiency of the gradual method and its danger of septic infection.

After the early months of gestation it may be necessary to dilate the uterus artificially for acute and threatened toxemia, placenta prævia and for the premature separation of the normally situated placenta

IN TOXEMIA

In selecting indications for this procedure we must distinguish between the nephritis of pregnancy and acute toxemia of hepatic origin The nephritis of pregnancy is not an indication for the rapid emptying of the uterus These cases can be safely managed by other means Should treatment not prove successful, placental changes will occur which will ultimately bring about the death of the fetus and be followed by its expulsion Should treatment be successful, the mother may proceed to full term, while in some cases the treatment addressed to the condition results in exciting labor The presence, then, of albumin in considerable quantity and of casts in the urine with symptoms of nephritis does not indicate a rapid emptying of the uterus

When the patient has altered pulse tension, however, the nervous disturbances of toxemia, obstinate constipation and evidences of disintegration of the blood which accompany this condition, the uterus should be emptied as soon as is consistent with the patient's safety Remembering the tendency to thrombosis and embolism and the hepatic congestion in these cases, that method must be selected which will do the least violence to the patient's tissues, thus avoiding the products of such violence which received into the circulation increase the danger of thrombosis and embolism in the viscera For rapid dilatation of the uterus, in these cases, whenever possible, the hand should be the instrument of choice If one finger can not be introduced, metal bougies or bladed dilators may be employed until one or two fingers can be inserted Bimanual dilatation with one or more fingers of each hand working synchronously in opposite directions is, in my experience, the most efficient method This may be carried to the point where the membranes may be ruptured and version performed, or the membranes ruptured and the forceps used for delivery Should the cervix prove unmanageable by the fingers, in my experience, Bossi's dilator employed to one-half or two-thirds its full capacity during thirty to forty-five minutes with anesthesia has proven harmless and efficient Except in rare cases, full dilatation with Bossi's dilator should be avoided, because of the danger of serious laceration Should these methods not prove sufficient, incisions of the cervix have given good results

Vaginal Cesarean section for acute toxemia or threat-

ened eclampsia is at present under wide discussion I have not yet seen a case in which it was clearly indicated In the hands of those accustomed to perform vaginal and abdominal section, this method may be available It requires, however, assistants and technic which can not always be commanded It is best available in well-equipped maternities It is questionable whether the extensive dissection required in some of these cases would not add to the patient's danger

In acute toxemia with threatened eclampsia, I have found elastic bags too slow in their action to be satisfactory The continued pressure of these bags without anesthesia tends to excite eclamptic convulsions Bags and bougies, in my experience, are contraindicated in this condition

I desire to call attention to the fact that in a considerable number of cases of virulent toxemia with eclampsia, the patient is hopelessly ill when the physician is summoned Beginning changes in the lungs, whether edematous or necrotic, forbid the use of anesthetics, and in these cases recovery under any form of treatment is exceedingly rare The analogy between these cases and patients with extensive pneumococcus infection of the lung is close, and as the surgeon would hesitate to anesthetize a patient seriously ill with pneumonia, so he should avoid anesthesia and direct interference with a pregnant patient suffering from acute toxemia and eclampsia in whom pulmonary lesions are either beginning or well pronounced Bleeding followed by saline transfusion, inhalation of oxygen and the very cautious use of veratrum, with rectal stimulation, give more hope of success

Abdominal Cesarean section in acute toxemia with eclampsia is no more indicated than are other operations requiring anesthesia and incision and suture of the tissues

IN PLACENTA PRÆVIA

In placenta prævia experience shows that the hand is far superior to any other instrument for dilatation Until the operator is ready to proceed the use of the gauze tampon is indicated to lessen hemorrhage and prepare the way for dilatation When, however, the necessary assistants and appliances for asepsis are at hand, dilatation should be performed In these cases the operator must use the hand in accordance with the conditions found on examination When the placenta completely covers the os it must be perforated by the fingers, and if possible, a foot seized and brought down Using the fetus as a plug the operator should not proceed to immediate delivery but promote gradual dilatation with the body of the child utilizing the opportunity to stimulate the mother In cases in which the placenta does not completely cover the os, the membranes may be ruptured cervix dilated and if the head be low down forceps may be applied and the child delivered If the head is not engaged version may be selected While the bimanual method of dilatation may be employed in placenta prævia in some cases it will be attended with more hemorrhage than dilatation by the one hand only

While in some cases of placenta prævia the elastic bag may be useful its action as a rule is too slow and its liability to promote hemorrhage too great to bring it into direct comparison with the hand

In my experience Bossi s dilator is an exceedingly dangerous instrument in placenta prævia The cervix and lower uterine segment are so softened by the increased vascularity accompanying the condition that the tissues tear readily and often fatally In a successful effort to secure a living child in central placenta prævia I have seen the anterior portion of the lower uterine segment torn and the urethra ruptured

Multiple incision of the cervix, vaginal Cesarean section or abdominal Cesarean section must be very rarely indicated in placenta prævia Only in the well-equipped maternity and under exceptional circumstances, should these operations be chosen While we must believe that cases of placenta prævia are sometimes seen in which the cervix is so hard as to be dilated with great difficulty, these cases must be exceedingly rare and should be exceptions to our rules of practice

IN PREMATURE SEPARATION OF NORMALLY SITUATED PLACENTA

In premature separation of the normally implanted placenta immediate delivery is demanded Here the thirty to forty-five minutes necessary for dilatation by Bossi s dilator or by the fingers is too long if a reasonably safe and quicker method is available It is here that Cesarean section, vaginal or abdominal, under appropriate surroundings should be selected In many cases the advantages would lie with vaginal Cesarean section, and consent may oftener be obtained for this operation than for the apparently more formidable one of abdominal Cesarean section I believe, however, that in many cases the abdominal method will prove the safer

In the hands of the physician not competent to perform Cesarean section, multiple incision of the cervix followed by introduction of the hand, rupture of the membranes and dilatation as rapidly as is consistent with the integrity of the mother s tissues should be chosen With the patient in good condition, without excessive hemorrhage, the use of Bossi's dilator and the hand may prove sufficient

The indications given for rapid dilatation of the uterus after viability comprise those most commonly seen Occasionally, however, cases are observed in which threatened exhaustion or some serious pathologic condition in the mother demands rapid delivery A labor apparently normal may proceed through its first stage and a portion of the second and exhaustion supervene In these cases dilatation with Bossi s dilator, followed by complete dilatation with the hand under anesthesia, will permit the operator to proceed to immediate delivery by forceps or version

IN COMPLICATED CASES

In patients whose pregnancy is complicated by cardiac lesion, impending death may demand immediate delivery In these cases if the patient be in a hospital vaginal Cesarean section, incision of the cervix or dilatation by the fingers may be chosen Occasionally, in phthisical patients, a similar choice must be made

In the event of maternal death before delivery during labor, the fetus continuing to live and in fair condition, that method of delivery must be selected which is quickest In my experience the advantages lie in abdominal Cesarean section in these cases

In discussing so important a subject, I desire to make an earnest plea with the profession that complicated cases of labor be given their due importance Medical science has now reached that stage of development when the general practitioner does not conduct a serious case of appendicitis or strangulated hernia without the aid of the surgeon Complicated cases of labor are more difficult and more responsible than the [illegible] cited We should no longer advise methods of treatment for these

cases because they can be carried out by the general practitioner any more than one would advise that a patient with appendicitis or strangulated hernia be deprived of operation and be given other treatment instead It must be rare indeed for the general practitioner to be so situated that he can not obtain for a complicated case of labor the services of an obstetrician Throughout the country there are so many well-equipped hospitals and facilities for transportation are so abundant that such cases, whenever possible, should be taken to hospitals and there receive adequate attention If this is impossible, obstetricians have means at their disposal for establishing in private houses the aseptic technic which makes all surgical operations comparatively safe

CONSIDERATION OF FETAL LIFE

I have said nothing concerning the consideration of fetal life For example, in placenta prævia, often times the best results are obtained by sacrificing the child in the interests of the mother When, however, the operator is so situated that he can perform any operation desired, and the parents express a strong wish that consideration be given the life of the fetus, this should not be neglected Abdominal Cesarean section may sometimes be elected in deference to this consideration

Clinical Notes

MULTIPLE ANEURISM OF THE AORTA, WITH RUPTURE INTO THE TRACHEA

PULMONARY TUBERCULOSIS SYMPTOMS SIMULATING PERICARDITIS *

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History—An unmarried colored man, 32 years old, employed as a waiter, was admitted to the Polyclinic Hospital on account of severe cough, which had been present for four or five months, together with frequent expectoration of viscid mucoid material and pain in the side of the chest on coughing and on deep inspiration His condition grew gradually worse, and five weeks before coming under observation he was compelled to give up work on account of persistent cough weakness and loss of flesh Four days before admission to the hospital he suddenly became much worse, with the development of pain in the back and the side and a feeling of compression in the precordium and shortness of breath while the previous symptoms continued with increasing severity

Examination—On admission the temperature was 98°, the pulse 112, the respirations 48 Respiration was labored and the expansion of the left side of the chest was obviously diminished, the portion below the clavicle moving scarcely at all The percussion note was dull over the entire left chest anteriorly and posteriorly, with the exception of the lowermost portion anteriorly, and the breath sounds were greatly enfeebled throughout the entire area of dulness The percussion note on the right side was clear while the breath sounds were intensified Marked and forcible pulsation was visible in the fifth and sixth interspaces an inch or more outside the left nipple line, giving rise to bulging to an extraordinary degree The area of cardiac percussion dulness was increased and the action of the heart was labored and the pulse weak. A systolic murmur was audible over the body of the heart near the pulmonic area, but no friction sound could be detected.

Shortly after admission an aspirating needle was introduced into the left eighth interspace in the midscapular line and four ounces of amber colored fluid were withdrawn The apparatus working badly at this time, the needle was again introduced several hours later and four ounces of blood stained fluid were obtained The fluid was straw colored and had a neutral reaction and a specific gravity of 1018 It contained a large amount of albumin and chlorids, and a slight coagulum formed at the bottom of the containing vessel In the sediment obtained by centrifugation and treated with Wright's stain only granular débris was found The hemoglobin percentage was 80, and the number of red blood corpuscles 4,100,000, the number of colorless corpuscles 13,200 in the cubic millimeter The patient gained no immediate relief from these procedures, although in the sitting posture the percussion note over the upper portion of the left chest just below the clavicle appeared clearer and the breath sounds more distinct

Diagnosis and Treatment—The presence of acute dilatation of the left side of the heart was suspected, while Dr Riesman, who was good enough to see the patient with me, suggested that the overaction of the heart, with the bulging apex beat and the disproportionately weak pulse, might represent untoward effects of the action of digitalis, which at this time we did not know had actually been administered Spirit of glonoin, 1 minim, and spirit of nitrous ether, 1 fluidram, were given every hour and tincture of aconite, 1 minim, every two hours for six doses, with the result that the heart grew quieter and the apex beat receded and became less marked The patient passed a fairly comfortable night, although he slept but little and complained of pain radiating from the left shoulder to the precordium The urine had a specific gravity of 1032 and contained a trace of albumin, with urates, but no sugar or tube casts

Further History—There was little change in the physical signs on the succeeding days, but the temperature began to rise on the second day, gradually reaching 103 2 on the third day The pulse ranged between 96 and 128 and the respirations between 28 and 48 At this time it was noticed that eating appeared to induce coughing and this, in turn, vomiting Previously, coughing had been quite unobserved, but now it became marked and the expectorated matter contained a slight admixture of blood The percussion note became clearer over the upper half of the left chest, with roughened breathing and mucous râles, while dulness persisted over the lower half, with enfeebled breath sounds Vocal resonance and fremitus were diminished in lesser degree above than below The hemoglobin percentage was found to be 96 per cent, the number of red blood corpuscles 5,050,000, the number of colorless corpuscles 11,800 in the cubic millimeter

On the fourth day it was noted that the patient complained of severe precordial pain occurring in paroxysms He exhibited a preference to lie on the left side Morphin was administered hypodermically to secure sleep at night, but it produced only quiet On the fifth day an aspirating needle was introduced into the pericardial sac but only a small amount of blood was withdrawn The impulse of the heart was less pronounced and a to and fro murmur could be heard over the body of the organ The hemoglobin percentage at this time was 80 and the number of red corpuscles 4,100 000 and the number of colorless corpuscles 13,200 in the cubic millimeter

On the sixth day coarse crackling was noted at the end of inspiration The apex of the heart was now in the fourth interspace The patient was readily exhausted by any exertion, active or passive The sputum was greenish yellow in color and thick and tenacious in consistency It contained no lumpy or cheesy particles and no fibrinous casts Microscopically pus corpuscles, diplococci and staphylococci were found, together with a few rhomboidal crystals, but no tubercle bacilli On the seventh day the urine had a specific gravity of 1024, and was free from albumin, sugar and bile It contained a trace of indican an occasional hyaline tube cast cylindroids mucus, urates, leucocytes and epithelial cells It failed to yield the diazo reaction

On the ninth day it is recorded that the percussion note on the left side of the chest was hyperresonant from the clavicle down to the third interspace From here to the fourth interspace the note was mixed and below this it was dull The apex

* Read before the Section on General Medicine of the College of Physicians of Philadelphia Feb 11 1907

beat of the heart was visible in the fourth interspace in the parasternal line and here a to and fro rub was palpable and a marked to and fro friction murmur was audible. There was considerable cough, with blood tinged sputum Bronchial breathing could be heard over the base of the left lung from the angle of the scapula downward, together with small moist râles On the eleventh day the patient was comfortable and free from pain Respiration was easier and the man slept well at night without anodyne or hypnotic, although he continued weak

On the twelfth day the apex beat was most distinct in the fourth interspace one half inch within the nipple line and in the fifth interspace 1 inch within the nipple line On the thirteenth day the friction sound was much less audible over the heart and an occasional click was audible at the end of the systole On the fifteenth day the urine exhibited no abnormality On the following day the friction sound was no longer audible with the action of the heart, although appreciable with inspiration at and beyond the apex, Sonorous and sibilant râles with roughened breathing could be heard over the right chest anteriorly, with crackling râles posteriorly On the left the breath sounds were clear above, while below the angle of the scapula fine crepitation was audible and below this blowing breathing, with crepitation On the eighteenth day the first sound of the heart was dull at the apex and attended with a rough murmur in the second and third interspaces slightly to the left of the sternum where also occasional crackling was audible On the next day the patient was comfortable, taking food well, sleeping soundly at night, breathing with difficulty and coughing less

Death—The conditions described continued for three days, when without premonition the patient was seized with dyspnea and an attack of cough, resulting in the expectoration of about 1½ pints of blood, and within two minutes the man was dead. The urine had, on the day previously, again been found normal The temperature had pursued an irregular course, with a somewhat declining tendency, in the afternoon ranging between 103 2° on the third day and 100° on the twenty first day and in the morning between 101 8° on the fourth day and 98 4° on the day of death In the last six days of life it had fluctuated between 98 6° and 101 6° The pulse had fallen from 136 on the third day to 88 on the day preceding death, and the respirations from 52 to 24

Previous History—The patient had had measles, whooping cough, chicken pox and diphtheria in childhood and an attack of left sided pneumonia at the age of 16 At 27 or 28 he suffered for eight months with an infected wound of the leg following a punctured wound of the foot inflicted by a nail Two operations were required an anesthetic not being given in the second on account of the presence of a cardiac lesion At the age of 29 the man had been treated for an affection of the mitral valve He drank whisky rather freely and smoked little He had had three or four attacks of gonorrhea, the last one year before coming under observation He had a chancre at the age of 27, followed by a general cutaneous rash

Postmortem Examination—The left pleural cavity was found to contain 350 c c of straw colored fluid The left lung was bound to the chest wall from the anterior axillary line backward to the vertebral column by recent fibrinous adhesions that were readily broken up, the apex was bound by dense, resistant adhesions The right pleural cavity was free from both fluid and adhesions

The pericardium was not adherent to the pleura The pericardial sac contained about 6 c.c of straw colored fluid Its parietal surface was smooth, grayish white and glistening The visceral layer also was smooth and glistening On its anterior aspect it presented an area 4 cm long and 1 5 cm wide, deep purple in color, while directly opposite on the parietal layer was an area 1 cm long and 1 5 cm wide of deep red color Both lungs were constituted of three lobes The lower and median lobes of the left lung were solid while the upper lobe, though somewhat collapsed and nodular at the apex, contained a certain amount of air On section the lower lobe, especially at the center, was the seat of a large number of confluent tubercles, becoming progressively less dense toward the periphery A similar condition was present in the middle lobe and, perhaps in less marked degree, at the apex and base of the upper lobe Portions of the apex contained inspissated mucoid or cheesy masses The lower lobe of the right lung on section appeared stained a deep blood red and gentle pressure caused the escape of frothy mucus A similar condition was present in the middle and upper lobes The apex was the seat of a small number of whitish blue, apparently subpleural nodules Both lungs exhibited marked pigmentation, somewhat irregularly distributed, and in places apparently following the boundaries of the lobules

The spleen was flattened, apparently somewhat enlarged, dark red in color, flabby in consistency and on section rather friable

The liver was large and firm presenting a somewhat mottled appearance on section The gall bladder was normal

The kidneys were large, pale and fatty, with lines of hyperemia The capsules stripped readily, leaving behind a smooth surface

The heart was comparatively small, its valves and cavities normal The leaflets of the aortic valve were the seat of slightly opaque atheromatous change The arch of the aorta below and toward the right exhibited an aneurismal dilatation admitting the little finger for a distance of 2 cm At a distance of 1 cm to the left of this was a second dilatation of much the same size, which had eroded the trachea and ruptured into its lumen Somewhat farther to the left was a third aneurismal dilatation large enough to admit the thumb for a distance of 1 5 cm and partly filled with laminated clot A fourth aneurism arose from the thoracic aorta, about 3 5 cm below the arch This was 7 cm long, 5 cm thick and 4 cm wide It was filled with friable clot A fifth aneurismal sac, 14 cm long, arose at a slightly lower level and extended down to the diaphragm. The esophagus passed beneath the arch of the aorta to the right of the first and the latter two aneurisms and obliquely forward and upward and to the left over the surface of the second

Microscopic Examination—Dr Guthrie McConnell examined the lung tissues Small scattered areas were found apparently quite devoid of alveolar structure, which was replaced by tissue composed of cells containing epithelioid nuclei, lymphocytes and connective tissue Some portions of these areas were degenerated, as indicated by the granular appearance and the diffuse staining The alveoli generally were filled with albuminoid exudation containing numerous erythrocytes The liver exhibited little change other than slight hyperemia around the central vein of some of the lobules

The spleen exhibited some increase in connective tissue of the trabeculæ and slight congestion The lymph nodes were prominent

In the kidneys the cortical tubules exhibited marked cloudy swelling of the epithelium, absence of nuclei and granular deposits within the tubules The glomeruli in places were congested In one area a glomerulus was replaced by connective tissue, which also involved adjacent structures There was also round cell infiltration in areas

The case was at first looked on as one of pleural effusion, which it was thought might be due to the dilatation of the heart that appeared to be present The extraordinary bulging of the apex, in conjunction with the labored action of the heart, and the disproportionately small and feeble pulse, was, as stated thought possibly due to the excessive action of digitalis With the development of systolic and diastolic friction sounds over the heart the existence of pericarditis could not be excluded but puncture failed to disclose the presence of an effusion into the pericardial sac Somewhat later still as the temperature rose and the sputum became blood streaked and crepitant râles made their appearance the possibility of pneumonia had to be taken into consideration and the progressive improvement both objectively and subjectively around [illegible] gradual resolution of the morbid proce[illegible]

to confess that aneurism was not even suspected Perhaps an x-ray examination would have disclosed its presence, but in view of the situation with relation to the heart of the largest dilatation of the aorta and the inconsiderable dimensions of the others, reasonable doubt may exist as to this point. The fatal hemorrhage and the result of the postmortem examination were wholly unexpected Tuberculosis of the lungs had been suspected, but tubercle bacilli could not be found in the sputum during life We felt quite convinced that pericarditis was present, but of this there was no anatomic trace

Although the diagnosis was thus entirely at fault, we may comfort ourselves with the thought that at least the treatment employed did no harm, but, on the contrary, so far as this was possible, the rest in the recumbent posture, together with the administration of drugs having the power of lowering arterial tension and of diminishing the work of the heart, seemed to do symptomatic good It may, however, be admitted in view of the conditions found at autopsy that the puncture of the pericardium was not wholly free from danger

GUNSHOT WOUNDS INFECTED WITH THE BACILLUS OF MALIGNANT EDEMA.

REPORT OF TWO CASES, OPERATION, RECOVERY OF ONE

G H R GOSMAN, M D
AND
A. W WILLIAMS, M.D
Captains and Assistant Surgeons, U S Army
CAMP DOWNES, LEYTE, P I

Case 1 —*Patient* —Private Hilario Sajes, Philippine constabulary, a native of the Island of Leyte

History —The patient was brought into Camp Downes to the Military Hospital on the night of Jan 8, 1907, suffering from gunshot wounds caused by slugs projected from a native cannon (a lantaka[1]) The injuries had been sustained two days before admission to the hospital as the result of an encounter with pulajanes

Examination —Two wounds were found, the first, 4 by 2 cm in size, had its entrance in the dorsum of the right hand, no exit, the second had its point of entrance, 3 by 2 cm in size, on the anterior surface of the right wrist.

Treatment —The wounds were thoroughly cleaned and wet dressings (1 2000 hot mercury bichlorid) applied. On the following day a bluish discoloration extended over the hand, the warmth of the member (circulation) was still maintained On the second day multiple incisions were made with the object of evacuating pus On introducing the hypodermic needle to inject cocain for local anesthesia the pressure within very promptly forced the piston of the syringe back, filling the barrel of the syringe with gas On withdrawing the needle the gas sizzed out of the tissues No pus escaped from the incisions made in the tissues, only blood, serum and gas On the third day the thumb which was gangrenous was amputated and the muscles and subcutaneous tissues of the entire hand were found to be gangrenous Microscopic examination of a smear of serum from the tissues, stained with methylene blue, showed numerous bacilli, many of which showed spores, the pointed rods appearing at either end of the spores Several specimens emphasized the appearance of these spore-bearing bacilli

Diagnosis —The infection was diagnosed as one of malignant edema and was confirmed by a characteristic growth in stab cultures of nutrient agar The infection could be traced by the dilated blue superficial veins and swollen arm (one-third larger than normal) to a point two thirds the distance up the arm

Operation —A modified circular amputation was done, disarticulating at the shoulder joint An examination of a smear made from the tissues at this point was negative for the bacillus of malignant edema The patient's temperature, which had ranged from 103 to 104 F, promptly subsided to normal and an uneventful recovery ensued

Case 2 —*Patient* —Delfaliar Marcelo, volunterio (volunteer against the pulajanes), also a native of the Island of Leyte

History —Similar in every respect to that of Case 1 The two men were brought in together

Examination —The patient had a gunshot wound of the left leg The wound of entrance was 2 cm in diameter and located on the outer side of the upper third of the leg, the wound of exit, 3 cm in diameter, was on the inner aspect of the leg A bluish discoloration of the leg extended to the knee-joint and a strong odor of decomposition was present From the knee joint down the leg was swollen and cold There was a lacerated gunshot wound, 12 by 8 cm, on the inner surface of the right thigh.

Treatment —Hot local applications and rectal injections of strong coffee were administered during the night On the following morning the patient's general condition was bad, with no return of circulation in the leg

Operation —Amputation above the knee joint was decided on On incising the skin and subcutaneous tissues a crackling sound and a retraction of the skin were very marked This crackling was likewise apparent as the muscles were divided showing that a gas bacillus was undoubtedly present. No microscopic examination or culture was made The patient succumbed at the commencement of operation

Just how these patients became infected with the bacillus of malignant edema is not known, but, as they were in the mountains in rain and dirt for several days, it is believed they must be cases of infection from dirt. The probability of the bullets having been infected must be considered

1 A lantaka is a cannon made of gas pipe or iron piping of larger caliber old Spanish cannon etc., mounted on wheels or hard wood or lashed to a tree. For combustion match heads are usually used numerous slugs chains nails, screws and rocks are the projectiles A fuse ignites the match heads through a tube

VERONAL DERMATITIS

WILLIAM HOUSE, M.D
PORTLAND, ORE

In a search of the literature at my command I have been unable to find a record of any case of dermatitis due to veronal, although a number of deaths from large doses, two hundred and fifty grains or more, have been reported I have observed a considerable number of cases of drug eruption from copaiba, quinin, iodoform, iodids, bromids, and one from chlorid of gold and soda, but in no instance have I seen any eruption as acute and extensive as in the case here described

Veronal is being extensively used It is said to be efficient in doses of seven to ten grains, but I have used it repeatedly in fifteen-grain doses for insomnia In subacute mania I have given ten grains every three hours, and in acute alcoholism single doses of twenty grains In these and other cases in institution work I have prescribed, or seen prescribed by my colleague, R L Gillespie, about sixty ounces of veronal No unpleasant effects have been witnessed, except vertigo, until the following case occurred

Patient —D P, retired merchant, aged 61, suffering from subacute melancholia

History —I first saw him at 1 a m, February 10, on his arrival after an all day car ride He was tired and nervous and complained of inability to sleep He was given 15 grains of veronal He seemed to recognize it by the taste, and declared he had taken it before and it had poisoned him Inasmuch as he had been taking for months all kinds of nerve sedatives, this suggests a peculiar sensitiveness of taste for the drug, perhaps

part of his idiosyncrasy At the time the remark was construed as a delusion After taking the medicine he passed a restless night On visiting his room in the morning I found him sleeping soundly When aroused he complained of stupor and vertigo His body, which on retiring exhibited no dermal abnormality, was found to be covered with an extensive eruption symmetrically distributed. The face appeared red, swollen and congested On the back of the thorax the skin was hyperemic and tense, as in severe scarlet fever, and appeared as angry as does erysipelas The front of the body and the arms and legs presented an eruption of blotches ranging in size from a quarter to a half dollar, separated by spaces averaging an inch The center of each was a dark red papule, surrounded by a less intense raised area shading rather sharply into normal skin The whole appearance was that of a severe bee sting or spider bite Most of the blotches were circular in outline on the body and oval on the limbs, the long axes corresponding to the long axes of the limbs About the axillæ the eruption was absent, the skin, by contrast, appearing curiously white The itching was intense At 3 p m the temperature had risen to 103 F, the pulse to 112, and the general appearance of the patient suggested severe toxemia The temperature subsided to 99 F by the following morning, rising to 100 F in the afternoon, and returning to normal the next day Meanwhile, the rash and toxic symptoms gradually disappeared, so that all that remained were a number of small petechiæ marking the sites of the larger lesions

The cause of the dermatitis is verified by the statement of his former physician, that he had witnessed a similar eruption and toxemia in this patient after giving him five grains of veronal and repeating it in three hours The significance of the eruption was not grasped until it occurred for the second time under medical observation The patient also assures us that he took the same drug at a still earlier period with identical results

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THE NEGLECT OF THE ANAMNESIS

BAYARD HOLMES, B S, M D
CHICAGO

Fashion is inexorable The movements of the human mind in the form of public opinion and public action are like the tides At one time a whole nation seems to be moved by a propulsive insanity and they trek to a new country or a new shrine Again the sea calls and in every gulf and along every coast creep the galleys and bilanders of the adventurers In a century Europe was suddenly covered with useless and meaningless towers that later furnished an almost inexhaustible supply of building material for the masonry of another period While Athens was a city of thatched hovels and skin clad warriors a race was born that produced an imperishable art and an almost indestructible architecture A new world was discovered in one century and in another America was subdued and contracted by an interminable network of iron roads In medicine the same phenomena are observed. Pathology grew out of empiric medicine in the Fifties and in the Eighties antiseptic surgery and bacteriologic pathology sweep the remnants of the old empiricism and the old pathology aside and the literature of medicine was rewritten.

It is hopeless indeed to attempt to turn these ocean currents of the mind these tides of human activity, to call a halt in the unreasonable flow of energy in the direction which it unthinkingly takes The successful man and the time server go with the current the philosopher looks on with regret and the impetuous youth struggles against the invincible The undue attention which the medical curriculum gives laboratory study and microscopic investigation impresses the student with an exaggerated sense of the importance of the evidence they afford The result has been a dangerous neglect of the study of the clinical history by our younger men and a great loss in the wisdom as opposed to the knowledge of the resulting doctor The patient is and always will be worthy of more study than the disease, and his recovery and not the diagnosis is his need and the duty of the doctor Our medical ancestors knew this A few of us hiding behind some protecting buttress to escape the frenzied horde of diagnosticians with their armament of microscopes, ophthalmoscopes, laryngoscopes, cystoscopes, and proctoscopes still believe it

Thirty years ago the medical schools of the United States furnished but little laboratory teaching The first meddlesome work which the author did in the curriculum of the college to which he was attached was to extend very greatly the laboratory method and to tax his faculty with fifty thousand dollars for buildings and equipment, to double the faculty with an army of laboratory teachers, and to add to the burdens of the student a year or two of time This extension proved fashionable, while the coincident clinical and literary courses were never realized. All other medical schools followed with enormous laboratories and extensive laboratory courses But to the profession these methods have proved disappointing They monopolize the time of the student, they disparage the study of the history of the patient and all clinical observation and they utterly neglect the medical literature and send out the young doctor with a distorted sense of the probability of disease ignorant of the experience of medicine, and armed with impedimenta of prejudice and paraphernalia of diagnostic instruments and wholly out of sympathy with the profession whose emoluments he would divide, and ignorant of the life of the community on whom he expects to subsist All this is attested by the proceedings of our medical societies, by the columns of our medical press and by the bag of instruments of our young medical men, and by their utter disregard of any sense of responsibility to cure the patient

Far be it from me to disparage microscopy, enteroscopy, or even cryoscopy, but the value of the anamnesis and the immeasurable and prepondering reliability of the evidence of the master sense of touch can not safely be discredited or denied The reader may never know the full meaning of this until personal misfortune overtakes him or his and he calls on the laboratory physician for help and finds him, hound like, searching out with his cold and sharp nosed instruments, the stirrer up of disease utterly regardless of the patient's need of physical support Then will he value less highly the product of this method which is plainly marked, "made in Germany" and might be marked because it does not fairly represent the best Teutonic product, "for exportation only" Then will appear most forcibly the truth of the Hippocratic adage "It is the duty of the doctor to cure his patient." Our education should strive to produce less of a laboratory man than a diagnostician less of a diagnostician than a doctor, and less of a doctor than a fellowman

104 East Fortieth Street

Sign of Suprarenal and Meningeal Disturbance The White Line—Sergent announced in 1903 that he had had occasion to observe a condition simulating meningitis in a young girl, but autopsy revealed complete cheesy degeneration of both suprarenal capsules while the meninges were intact A white line appeared when the finger nail was drawn across the abdomen of the patient and lasted for two to five minutes He has since noted this white line in a number of other cases in which the suprarenals were primarily or secondarily affected and others have confirmed his observation Sergent has never observed the white line with an arterial pressure above 13 (Potain) It disappears on administration of adrenalin and is evidently due to reflex spasm of the capillaries during low arterial tension with more or less dilatation of the vessels The subject was discussed at the meeting of the Paris Society Medecine Hôp in February at which some cases of the suprarenal pseudo meningitis were reported as also two cases of insolation in which the white line or a partially red line was noticed. In both the latter cases lumbar puncture with removal of 20 cc of fluid had a marked beneficial effect especially on the headache The fluid was [illegible] but under [illegible] tension

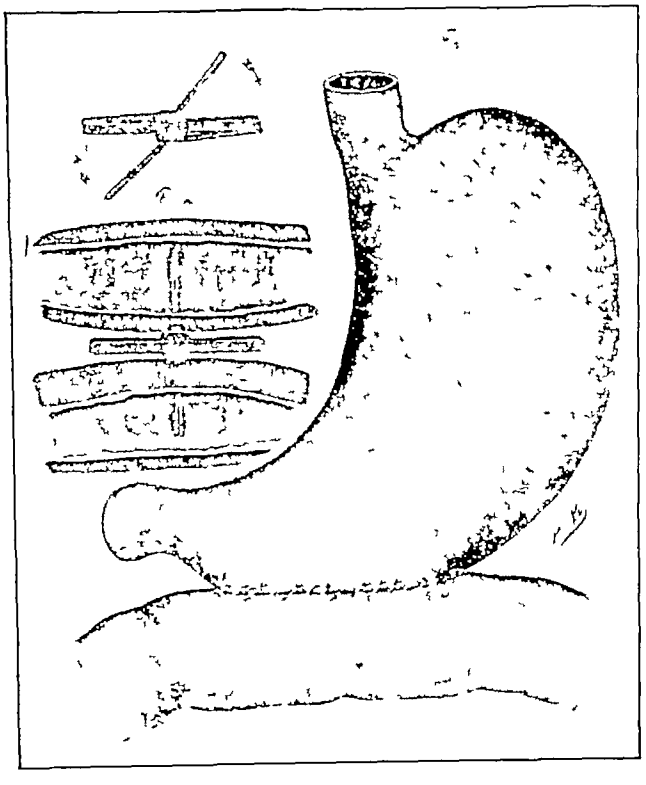
PRESSURE CLAMP FOR LATERAL ANASTOMOSIS

PRELIMINARY REPORT

WILLIAM SENN, M.D
CHICAGO

This appliance consists of a base bar 2⅛ inches long, with cross-arms one inch in length, hinged at the center point of the bar and so arranged as to be forced down on the base by means of a spring causing pressure of about four pounds to the inch When opened the clamp is cruciform, when the cross-arms are closed the clamp has a width of 3/8 inch and a thickness of 3/16 inch Figure 1 shows the alternate arms partially closed

The clamp is applied as follows The surfaces to be approximated having been brought in apposition, the walls are punctured down to the mucous membrane (1/8 inch incision), the opened cross-arms are forced through mucous membrane into the lumen of the bowel and, with a flat probe or like instrument, used as a wedge, the cross-arms are spread and closed on the base bar, as a knife blade is closed, leaving intestinal wall between



the closed cross-arm and the base bar The opposite cross-arms are similarly inserted into the opposing organ and closed in a like manner A continuous Lembert suture is then applied if time permits, enclosing the clamp, which is left to slough through in a manner similar to that when a McGraw ligature is applied This procedure is illustrated in Figure 2, the cross-arms being inserted, but not closed Figure 3 shows anastomosis completed

Experiments on dogs have shown that the clamp sloughs through in about seven days An opening was left between the stomach and duodenum about 2 inches in diameter Union was perfect leaving a smooth mucous lining approximation complete

100 State Street

THE CLIMATE OF SOUTHERN MAINE IN THE TREATMENT OF THE LATER STAGES OF HYPERTONIA VASORUM

LOUIS FAUGERES BISHOP, M.D
NEW YORK CITY

The climate of southern Maine during the summer months is decidedly bracing in character, and has many advantages in the treatment of diseases of the circulation which have developed as a result of mental overwork and worry in persons otherwise healthy These patients we sometimes speak of as cases of secondary low arterial tension, because they are suffering from a failure of the circulation secondary to vascular strain It is, however, better to speak of them as the later stages of hypertonia vasorum, because so many while suffering from the effects of a failing circulation, nevertheless, do not exhibit at all times the low tension to which they have a strong tendency Increased or excessive vessel tone has its origin in other conditions than organic disease of the kidneys or blood vessels

Hypertonia vasorum of nervous origin is a distinctly modern disease, and although it has been noticed by older writers it has never been given the prominence it deserves Patients suffering from this malady, as the result of mental strain and worry, show signs much of the time of a chronic high tension in the arteries This is followed by cardiac hypertrophy and the train of symptoms which we all as clinicians have so often observed

To understand how this comes about it is necessary to recognize the existence of a tone-maintaining function of the central nervous system that is constantly exercised over the peripheral circulation If such a force did not exist the blood would immediately settle to the dependent portions of the body, dilating the blood vessels, and the circulation as such would cease to exist. But any undue strain on the nervous system leads to an over-activity of this tone-maintaining function and finally develops a chronic overtone, which makes it difficult for the blood to circulate and wears out the heart by increasing resistance Consequently there develop irregularities in the circulation and damage to the blood vessels, which frequently lead to accidents in the brain, followed by paralytic symptoms I have seen a number of such patients presenting dilatation of the heart, general debility with decided weakness of one arm and leg, and even fairly marked aphasia, make very satisfactory progress toward recovery during a single summer on the coast of southern Maine

My observations were made during summer practice at York Harbor Here the climate in summer is an unusual combination of coolness and dryness The coast recedes so that the fogs, which are so troublesome in northern Maine and even in Rhode Island, are not frequent The soil is such that in a short time after a rainfall it is entirely dry Excessive heat in summer is almost unknown The summer climate in Maine, as affording a pleasurable existence to the sojourner in hot weather is too well known to need commendation here but its importance as a health resort, especially for this particular class of invalids—that is of brain workers who are suffering from disorders of the circulation—should be much better known

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Free Dispensary Abuse—The trustees of our medical charities can check the abuse by enforcing the payment of adequate fees by private ward patients and by careful investigation of out patients—G W Gay Boston

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON OFFICIAL REMEDIES" THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL

W A PUCKNER, SECRETARY

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month)

(Continued from page 1185)

AKARALGIA

GRANULAR EFFERVESCENT SODIUM SALICYLATE COMPOUND-MERRELL.

A mixture each 8 Gm (2 drams) of which is said to represent sodium sulphate 2 Gm (30 grains) sodium salicylate (Merrel) 0 6 Gm (10 grains), magnesium sulphate 3 3 Gm (50 grains) lithium benzoate 0 3 Gm. (5 grains) and tincture of nux vomica 0 4 Cc. (6 minims)

Dosage—8 Gm (2 drams) in 120 Cc (4 ounces) of water, one-half hour before meals, in acute cases one dose every two or three hours until relieved.

Prepared by Wm. S Merrell Chemical Co Cincinnati Ohio

ANTISEPTIC-Credé

A name applied to Silver Citrate, which see

Manufactured by Fabrik von Heyden, Radebeul, near Dresden Germany (Schering & Glatz, New York)

DOLOMOL

Dolomol is magnesium stearate $Mg(C_{18}H_3O_2)_2$, containing small amounts of magnesium palmitate and oleate

It is a white powder insoluble in water unctuous to the touch, nearly odorless and tasteless. It is claimed to be practically free from oleate Its magnesium content corresponds to nearly 7 per cent. MgO

Action, Uses and Dosage—Acting as a protective to the skin, Dolomol is recommended in cutaneous affections as a dusting powder, alone or mixed with various remedies

The following dolomol compounds are listed Dolomol Acetanilid, 25 per cent. Dolomol Acid Boric, 20 per cent. Dolomol Acid Carbolic, 5 per cent. Dolomol Acid Picric, 25 per cent. Dolomol Acid Pyrogallic, 5 per cent. Dolomol Acid Salicylic, 5 per cent. Dolomol Acid Salicylic, 10 per cent. Dolomol Acid Tannic, 10 per cent. Dolomol Alum 10 per cent. Dolomol Aristol 10 per cent Dolomol Balsam Peru 10 per cent Dolomol Bismuth Subgallate 25 per cent Dolomol Calendula 25 per cent. Dolomol Calomel 25 per cent. Dolomol Camphor 10 per cent. Dolomol Chrysarobin 5 per cent Dolomol Europhen 10 per cent Dolomol Guaiacol 5 per cent Dolomol Ichthyol 10 per cent Dolomol Iodoform Deodorant 10 per cent Dolomol Menthol 5 per cent Dolomol Naphthol 5 per cent Dolomol Oil of Cade 10 per cent. Dolomol Resorcin 10 per cent. Dolomol Salol 10 per cent Dolomol Sulphur Sub. 25 per cent. Dolomol Tar 10 per cent Dolomol Thymol 2 per cent.

Manufactured by Pulvola Chemical Co New York Not patented or trademarked

ELIXIR OF ENZYMES

Elixir of enzymes is a solution containing pepsin and rennet in a menstruum containing 20 per cent of alcohol

Elixir of enzymes is a light yellow palatable liquid preparation One part digests about 20 parts of coagulated egg albumin in 24 hours Eight Cc (2 fluidrams) coagulate 500 Cc. (one pint) of milk in a few minutes

Actions and Uses—It is claimed to be useful as an aid to digestion and as a vehicle for various drugs

Dosage—4 to 8 Cc (1 to 2 fluidrams) with meals, children in proportion

Manufactured by Armour & Co Chicago

LUBRASEPTIC

Lubraseptic is a jelly prepared from Chondrus (Irish moss) containing 2 per cent boric acid and 0 067 per cent formaldehyde

The material is packed in screw cap metal tubes and sterilized by heat.

Lubraseptic is a colorless transparent jelly almost completely soluble in water It is claimed to be absolutely sterile

Actions and Uses—Lubraseptic is said to be a disinfectant which is non-irritating to the skin or mucous membranes

It is claimed to be useful as a lubricant for the fingers or for surgical instruments and as a dressing for burns, abrasions and slight lesions

Dosage—It is put up in collapsible tubes and it is suggested to reject the portion first expressed to make sure of the sterile condition of that used

Prepared by Russell & Lawrie, Tarrytown N Y

PERHYDROL

THIRTY PER CENT SOLUTION OF HYDROGEN DIOXIDE

Perhydrol is a 30 per cent solution of hydrogen dioxide which is free from acid

While perhydrol is stable dilutions of perhydrol rapidly deteriorate unless they are preserved by the addition of some acid

Actions and Uses—By suitable dilution a preparation is obtained equivalent to the official solution of hydrogen dioxide An advantage is claimed for this preparation that it is less irritating on account of the absence of acid The full strength preparation is said to be useful as an application to nevi, ulcers, gummata, etc Diluted one-half to two-thirds, it may be applied to syphilitic ulcers gangrenous processes, ulcerating buboes, in endometritis, suppuration of the middle ear, etc

Manufactured by E Merck Darmstadt (Merck & Co New York) U S trademark No 44147

PHENOLPHTHALEIN

Phenolphthalein, $CO\begin{matrix}/C_6H_4\backslash \\ \backslash O /\end{matrix}C\begin{matrix}/C_6H_4OH \\ \backslash C_6H_4OH\end{matrix} = C_{20}H_{14}O_4$, is a product of the interaction of phenol and phthalic anyhydride

It may be prepared by heating together 10 parts of phenol 5 parts of phthalic anhydride and 4 parts of concentrated sulphuric acid for 10 to 12 hours at 115 to 120 C (239 to 248 F) The product of the reaction is boiled with water and the residue dissolved in soda lye From this solution the phenolphthalein is precipitated by the addition of acetic acid The precipitate after washing is dissolved in six times its weight of absolute alcohol and the solution decolorized by animal charcoal A part of the alcohol is then distilled the mixture filtered and the phenolphthalein separated from the filtrate by the addition of water

Phenolphthalein occurs as a crystalline or amorphous powder white or grayish white melting at 250 to 253 C (482 to 487 4 F) It is soluble in 600 parts of water and in 10 of alcohol Its solutions in acid liquids are colorless but turn red when the liquid is alkaline The red color of the solution disappears if it is boiled with zinc dust phenolphthalin $C_{20}H_{16}O_4$ being formed

Phenolphthalein heated on platinum foil should burn leaving no residue.

Actions and Uses—Phenolphthalein acts as a purgative but appears to possess no further physiologic action A case of poisoning from taking 1 Gm (15 grains) is reported

Dosage—For adults the average dose is 0 1 to 0 2 Gm (1 5 to 3 grains) given as powder in cachets capsules or pills It may be given with safety in doses of 0 5 Gm (8 grains) and these doses seem to be necessary to secure its effects in bedridden patients or in obstinate cases

SILVER LACTATE Credé

A name applied to Silver Lactate which see

Manufactured by Fabrik von Heyden, Radebeul, near Dresden Germany (Schering & Glatz, New York)

(To be continued)

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[For other information see second page following reading matter]

SATURDAY, APRIL 20, 1907

SPIROCHETES IN SO CALLED MOUSE CARCINOMA

The observation by Gaylord[1] and also by Calkins[2] that spirochetes occur in transplantable cancers in mice at once raises many interesting questions Gaylord has demonstrated by means of Levaditi's silver method a characteristic spiral organism in the sections of ten consecutive spontaneous carcinomas of the breast in mice from Massachusetts, Ohio and New York The same organism was found in transplanted tumors from all these sources

In fresh material the organism is not readily demonstrable, but when found it is frequently motile In the primary tumors the organisms are most numerous in the most actively growing parts where they occur in the stroma between the epithelial cells of the tumor and at the margins of the latter In transplanted tumors they are found between the cells and in the connective tissue at the growing edge The more malignant, i e rapidly growing, the tumor the greater the number of the organisms Calkins proposes the name *Spirocheta microgyrata gaylordi* for this organism, which he regards as a variety of Lowenthal's *Spirocheta microgyrata*, described in 1906 in ulcerated human carcinoma, in a dog tumor, and in feces Calkins, in New York City, has found the same spirochete as Gaylord in a spontaneous mouse tumor It may be recalled that Borrel[3] in 1905 observed spirochetes in mouse tumors, to which, however, he does not appear to have given any further attention Other similar observations have been recorded also

Gaylord makes this remark "Our observations do not as yet establish an etiologic relationship between this organism and cancer of the breast in mice, but the presence of the organism in primary mouse cancer, with which it is regularly transplanted through many generations greatly increasing in number as the tumors increase in virulence, instead of interfering with, and finally preventing, transplantation as do bacteria, is suggestive" This certainly is a conservative conclusion, much further work by many investigators in different places is necessary to settle the question of the relation of this spirochete to mouse cancer, and it is quite safe to predict that a large part of the experimental cancer investigation in the immediate future will be given to the solution of this question We may expect, in the near future, to see a flood of literature on this phase of cancer

The possibility that mouse cancer may be a spirochetal infection throws new light on many phenomena observed in the course of the enormous work in the transplantation of these growths Heretofore, the results being viewed from the standpoint of the malignant tumors in man, such things as spontaneous healing, natural and acquired resistance and similar conditions have appeared explainable only by more or less far-fetched hypotheses But if looked at from the microbic point of view, these phenomena become readily explainable in the more familiar terms resistance, susceptibility, healing, and immunity in infections

Naturally the results of future work on mouse tumors will be awaited with the keenest interest. It is not wise to apply purely anticipatory investigative results to human cancer This much may be said, however If mouse cancer, so-called, be shown to be of spirochetal origin, that would not necessarily mean that human malignant tumors are also spirochetal growths The demonstration that growths in animals corresponding in certain essential points to human cancer are of infectious origin naturally would give strong support to the so-called parasite theory of cancer Nevertheless the one fact (to mention only one) that the cancerous growths have been found without exception to be transplantable only within the species in which they arise spontaneously indicates that the causative agent, whatever its nature, in each case is peculiar to the species in question

1 Jour of Infect Dis 1907 iv 155
2 Ibid 171
3 Comp rend de la Soc de Biol 1905 lviii 770

THE PHYSIOLOGIC ACTION OF ALCOHOL

The social and hygienic evils connected with the abuse of alcohol as well as its application in therapeutics, render important any new facts concerning the effects of this agent on the processes of metabolism While in moderation it may be indulged in for long periods without apparent impairment of the general health, its excessive use is undoubtedly attended with functional and organic changes of a pathologic character

It was long held that alcohol in moderate doses acted as a specific in "conserving the tissues," or, in other words, it checked metabolic waste With the knowledge that it is oxidized in the body, it was recognized as a source of energy, and the view became generally accepted that it acts to some extent also as a food, thus sparing to a certain degree the proteid constituents of the body itself

There appears, however, to be a diversity of opinion regarding its influence on the oxidation processes when taken in small repeated doses, and its exact value as a food is now questioned Although much study has been devoted to a solution of the problem, the results have hitherto been meager

The Hygienic Laboratory[1] of the Public Health and Marine-Hospital Service has just issued an interesting and valuable report of studies on experimental alcoholism conducted by Dr Reid Hunt, chief of the Division of Pharmacology of that institution Experimental evidence is presented showing that extremely moderate amounts of alcohol when administered even for a short period may produce profound changes in metabolism, which, under certain circumstances, are deleterious in character

Hunt's first series of experiments were made with animals that had been fed on oats soaked in alcohol After a variable time these animals were given doses of acetonitrile, a substance which may be considered chemically as hydrocyanic acid in which the hydrogen atom has been replaced by the methyl group This agent owes its physiologic activity to the liberation of hydrocyanic acid, and if this liberation is hastened its poisonous effects evidently become more manifest

It was found that a hypersusceptibility to this poison had developed in the alcohol animals, as they succumbed to doses very much smaller than necessary to produce death in controls This susceptibility was undoubtedly due to the continued ingestion of alcohol, as in all other respects the conditions of the animals were identical

As alcohol is easily oxidizable in the body, it seemed reasonable to suppose that its continued use would increase the oxidizing power of the body—in other words, that tolerance is thus established

These experiments show that this really does occur and that its continued administration also increases the power of the body to break up other alcohol groups, the methyl group of the acetonitrile being oxidized more readily in alcohol animals with a resulting increased liberation of hydrocyanic acid

A second series of experiments is given showing that guinea-pigs fed on alcohol when given acetonitrile excrete more sulphocyanate, the formation of which from acetonitrile seems to be a protective reaction on the part of the body against this poison This increased excretion is taken as further evidence that, under the conditions maintained in these experiments, there is a corresponding increase in the liberation of hydrocyanic acid

It thus appears to be clearly proved that marked changes in the processes of metabolism are brought about by the administration of alcohol in doses small enough never to have caused symptoms of intoxication and that these changes are probably due to modification of the oxidation processes in the body

Such changes do not follow the administration of the carbohydrates On the contrary Hunt shows that mice fed on oats soaked in dextrose acquire a distinct resistance to acetonitrile, and he therefore, points out that too much importance should not be attached to the proteid sparing power of alcohol in practical dietaries

These views are in accord with those of Chittenden,[2] who, while he admits that alcohol in moderate doses may act as a food in the sense that it is a source of energy, denies that it is comparable with the carbohydrates, as, unlike the latter, it produces an increased excretion of uric acid, which is inimical to health

Hunt has also shown in this report that the continued administration of alcohol markedly increases the excretion of ethereal sulphates in the urine These latter products in all probability may be attributed to intestinal putrefaction—a condition often found in alcoholics

The excretion of neutral sulphates was, if anything, decreased The increased excretion of this product has been taken as a diminution of physiologic oxidation These results, therefore, are an additional argument that alcohol has but a limited power of inhibiting oxidations

While it is shown that the use of alcohol increases the power of the body to break up acetonitrile, modifications of the physiologic processes may not have the same deleterious effect in the case of other poisons Alcohol is known to be a stimulant, a source of energy and heat, and the changes in physiologic functions observed by Hunt may eventually be shown to be of advantage in certain diseases

1 Hygienic Laboratory Bulletin No 33 Public Health and Marine Hospital Service
2 Med News vol lxxxvi 721

THE EUROPEAN WAY

Von Bergmann died the other day—but not before he was able to feel the esteem in which his fellow-countrymen both professional and lay, held him When recently he had attained to three score and ten his birthday was made the occasion of a national expression of very real affection Truly, apart from his labors as scientist and surgeon, he had done the state some service In appreciation some forty delegations called on him bringing gifts of every kind, and they consumed over five hours in passing before him The universities were impressively represented He had been very zealous during three wars and had served his government in other capacities, wherefore the Ministers of War and of Education were present to make acknowledgement of these debts Men notable in the arts, in music and the drama paid tribute to his profound sympathies and culture, such as are characteristic of the highest type of German scholarship Four important works were published in commemoration of this great birthday He was probably most touched by the fact that at a banquet held on the invitation of the Berlin Medical Society, and attended by over 500 distinguished people, his wife and daughters being present, were toasted in recognition of what they (*das Frauenzimmer*) had done for him and through him for humanity

A Parisian newspaper recently propounded the question Who are the ten greatest Frenchmen of the Nineteenth Century? Fifteen million votes were received Pasteur heading the pool with 1 300 [illegible] votes—a majority of 100 000 over V[illegible]

among these ten were also Curie and Roux, the great Napoleon was fourth Evidently, then, science holds a high place in the esteem of the French people, they seem, over there, to be really grateful to the man eager to relieve suffering and to prolong life

Berthelot, chemist and statesman, died recently in Paris under affecting circumstances Coming home he found that his venerable wife had died suddenly, he went into his study and, evidently overwhelmed by the shock, presently himself expired The noble pair were laid in state in the Panthéon in the presence of a great assemblage, including President Fallières, the cabinet ministers, the diplomatic corps, members of the French Academy, judges, deputies, senators and deputations from the learned societies M Briant, Minister of Education, took part in the imposing ceremonies, relating in an impressive speech the dead senator's achievements in chemistry and other sciences When the orations were concluded all the troops composing the garrison of Paris defiled before the catafalque, and on that day every school in France was closed

Here were three tributes to three great men of science What was said of Berthelot was said also of Pasteur, and applies equally well to von Bergmann "The man in him transcended the scientist and made him as beloved as he was eminent."

The point is that these great men were and are in memory affectionately appreciated by their countrymen This is evidently the European way—which does not seem to be the American way Possibly we have not yet evoluted to that degree of civilization By way of contrast we might note that among us, as in Paris, the question has been propounded Who are the ten greatest living Americans — statesman, soldier, sociologist, preacher, author, railroad expert, athlete, educator, lawmaker and conversationalist? Who these ten are we are not informed, we observe, however, with mortification, that no curiosity has been manifested concerning the greatest American physician Even the greatest American scientist has been left most dismally out in the cold

THE DIGESTIVE ACTION OF LEUCOCYTES

The important rôle played by leucocytes in removing and dissolving dead tissues, pneumonic exudates, foreign bodies, etc, depends on the powerful digestive enzymes which they contain, and which are liberated from the bodies of the leucocytes on their disintegration Although all cells seem to be equipped with similar proteid-digesting enzymes, yet in the fixed tissues these seem to be relatively feeble, for under most pathologic conditions absorption goes on very slowly or not at all unless leucocytes are present, and the rate of digestion or absorption varies directly with the number of leucocytes To illustrate A tuberculous lesion may contain large areas of necrotic tissue which persist for a long time, but if some chemotactic substance is injected into these areas (e g iodoform emulsion), the invading leucocytes promptly digest the dead tissue and remove it It may be added, parenthetically, that many instances of supposed suppuration following such injections into tuberculous areas do not depend on pus infection, but on this liquefactive action of the leucocytes As absorption of dead tissues and exudates is such an important process in medicine and pathology, recent studies into the nature of the enzymes of the leucocytes possess more than theoretical interest

The chief studies on this subject have been made by E L Opie[1] in the Rockefeller Institute, and have yielded many interesting results In the first place, it has been demonstrated that the chief proteid-splitting enzyme of the polynuclear leucocytes is quite different from the proteid-splitting enzymes of nearly all the other cells of the body, for the enzymes of the polynuclear leucocytes act best in a faintly alkaline medium, whereas the ordinary cellular enzymes act best in an acid medium, and little or not at all in alkaline fluids The mononuclear leucocytes and the lymphatic tissues from which they come seem to contain chiefly enzymes which, pepsin like, require an acid medium Apparently the only fixed tissue which contains enzymes acting best in alkaline media is the bone marrow, this chemical observation supports the microscopic evidence that the polynuclear leucocytes arise in the bone marrow, while the mononuclears come from the spleen and lymph glands The fact that the proteid-digesting enzymes of our fixed tissues require an acid medium for their action, would suggest that the failure of living tissues to digest themselves depends on the "alkalinity" of the blood, and it is possible that this explanation is of some importance But that being so, the question arises What holds the leucocytic enzymes in check if they are best adapted to an alkaline medium? The apparent answer to this seems to lie in the observation that in the normal blood plasma there is contained a substance which has the power of holding the leucocytic enzymes in check. This "anti-enzyme" is present in but limited amounts, it would seem, and hence when large numbers of leucocytes accumulate and disintegrate they may over-saturate the amount of anti-enzyme present and digest any dead proteids that may be at hand It is also quite possible that in infected or necrotic areas substances form which neutralize or destroy the anti-enzymes, and thus permit the leucocytes to begin their digestive action

The antagonistic action of these two constituents of the blood affords an instance of the way in which vital processes are held within certain suitable limits by means of balancing one action against another As an instance illustrating the effects of the balancing of leucocytic enzymes by the anti-enzymes of the serum in a special case, may be mentioned the conditions observed in the rabbit. It is well known by laboratory workers that infection with pus microbes in rabbits does not usually produce the creamy pus seen in human infections, but

1 Literature will be found in the Jour Exp Med. 1907, ix, 207

rather a solid cheesy mass of leucocytes and dead tissues is formed This is explained by the fact that rabbits' leucocytes contain but a feeble proteid-digesting enzyme, while rabbits' blood serum is rich in the anti-enzymes, hence digestive softening of the necrosed cells does not readily take place

THE MEDICAL EXPERT

If any further data are necessary to convince the most conservative that changes are needed with regard to expert testimony in our courts, the proceedings in the recent Thaw trial will certainly furnish them Here weeks of time were consumed by the clashing of the alienists and the wrangles over their testimony, yet nothing could have been more futile or inconsequential than that testimony

A juryman has graphically recorded his impressions and in terms singularly just In examining one expert the attorney for the people displayed "an amazing grasp of an intricately technical subject" The prosecutor is not, of course, a medical man, yet his knowledge of a matter essentially medical was manifestly much greater than that of the unhappy witness, and the proceedings were strongly suggestive of "a cat playing with a mouse" Another alienist appeared, from the jury box, to be "one of those rare souls who are unconscious of time, since they inhabit eternity, and as his incumbency of the stand dragged through session after session the humor of the situation began to appeal even to the impatient twelve After various imposing and impressively qualified alienists had promptly answered 'rational' to a hypothetical question an hour and a quarter long, various other equally imposing alienists with equally impressive qualifications answered the same question quite as promptly with the word 'irrational'" It seemed to this juryman time wasted to have placed these experts on the stand to give answers so foreordained, they might best have been stood up in line and cancelled in pairs so that by a sort of *reductio ad absurdum* it might be seen by the remainder which side to credit

The chief point at issue in this case turned on the question of the defendant's sanity Yet here the jury seemed to pay no attention whatever to the opinions of the experts, who about evened up, as the juryman put it. These laymen judged the matter of sanity quite for themselves, and on what they deemed common sense principles

What physician will not be mortified by this editorial observation in the New York *Sun* "Nor do we purpose to waste any time on the great mass of expert testimony for or against the prisoner Suffice it to say that in this murder case, in which a liberal purse has been at command alienists of more or less prominence were produced who testified that Thaw at the time of the killing was insane or did not know that the murder was wrong On the other hand, many experts of equal or greater eminence produced by the District Attorney swore that Thaw was sane at the time"

The subject of medical expert testimony demands drastic revision Were it not best that we undertake this revision among ourselves, lest, to our humiliation, the laity through legislative bodies take the matter quite out of our hands? There are many views expressed and many plans suggested Those which should prevail must be based on the position that alienists should no longer be medical advocates for the side which retains them, they should no longer be aligned as partisans, with their respective legal counsel

THE MOLOKAI LEPER SETTLEMENT

The territory of Hawaii has the best organized and most extensive institution for dealing with leprosy in existence Segregation was first attempted in 1866 in the establishment of the leper settlement on Molokai island The administration, while at first disliked, has increased in popularity Many lepers come voluntarily for examination, others receive from the board of health an invitation which is practically an order All the patient's or suspect's expenses to and from the examining station at Honolulu are paid by the government The board of examiners consists of five physicians, one of whom is bacteriologist to the board of health and another skilled microscopist known as assistant bacteriologist Attempts at the curative treatment of leprosy have been many, and several imagined specifics have been tried at the settlement, but so far with uniformly unsuccessful results Medical treatment is carried on by a resident physician and his assistant and is frequently of much benefit even though not curative Surgical operations are performed more frequently than formerly and meet with considerable success While some lepers or suspects have been granted the privilege of re-examination and of return to their homes, of late years they have preferred to remain on the island, where they are assured of a comfortable living and better social privileges than they could enjoy in their homes The United States Leprosy Investigation Station is within the borders of the settlement, and it is hoped that its work will throw new light on this mysterious disease The problem of the disposal of the children born on the island or left by leprous parents has been partly solved by a girls' home under the care of the Sisters of St Francis and it is proposed to establish a similar home for boys, which may give the non-leprous children of leprous parents an industrial education fitting them for a useful life It is proposed by L E Pinkham, president of the board of health, that dairy farming be taught these boys as a branch of agriculture needing development in the islands

THE TRANSFORMATION OF DIABETES MELLITUS INTO DIABETES INSIPIDUS

The peculiarities of diabetes mellitus in elderly people are, some of them well known and usually recognized The fact that the glycosuria may disappear under the influence of a complicating nephritis and may never return has long been known and is very characteristic of a certain type of case The disappearance of the sugar with the continu

common, as Teschemacher[1] has pointed out Although the polyuria does not always go hand in hand with the glycosuria, as, for example, in the so-called diabetes decipiens, yet this is the rule, and in most patients when the glycosuria diminishes the amount of urine likewise becomes less Teschemacher cites several cases in which the glycosuria disappeared, even with the patient on a mixed diet, but the polyuria, with thirst and debility, persisted The patient thus presented at this stage the picture of diabetes insipidus Similar cases have been recorded before, and have been described as examples of a transition from one disease into the other That this is a proper interpretation is doubtful, for, as in one remarkable case cited by Teschemacher, the sugar may reappear after a long period of years So far as the clinical aspects of such cases are concerned they are finally diabetes insipidus These patients must not be confounded with diabetics who develop chronic interstitial nephritis with polyuria, in whose urine there is so little albumin that it is readily overlooked

USING THE FOOD AND DRUGS ACT TO MISLEAD

We have previously called attention to the use which some of the food and drug manufacturers and promoters are endeavoring to make of the guarantee clause of the national Food and Drugs Act The matter has become of sufficient importance to attract the attention of the Secretary of Agriculture, who has issued a statement on the subject He says "A serial number and the statement that a food or drug is 'guaranteed under the Food and Drugs Act June 30, 1906,' does not mean that the United States Government guarantees the purity of the article or guarantees that it is what the label says it is It simply means that the manufacturer guarantees it to be pure and free from adulteration and that he warrants every fact stated on the label to be true The government assumes no responsibility for the guarantee On the contrary, the serial number is assigned to fix the responsibility where it belongs—on the manufacturer—and to protect innocent dealers Such advertising as 'after Jan 1 1907, the United States Government will protect you by an official serial number,' or statements that the food product is 'approved by the pure food commissioners,' must be stopped at once If this outrageous misrepresentation does not cease the department will publish a list of the manufacturers who are indulging in this campaign of deception Manufacturers who are deceiving the public about the guarantee will lie about the quality of their products The pure food law is going to be administered fairly Its primary purpose is to protect the consumer" It is to be hoped that this public announcement of the facts in the daily press will put a stop to the brazen and unjustifiable efforts on the part of a certain class of manufacturers to make capital out of the very means that have been devised for restricting them and for preventing them from deceiving their customers Certain drug firms, for instance have announced in large letters that they were among the first ten firms to file their guarantees intimating that there was some particular virtue in such a proceeding These tactics are intended to deceive and do deceive, those who are not conversant with the provisions of the law

1 Münch med Wochschr March 19 1907

Medical News

ALABAMA.

Quarantine Is On.—Nominally the quarantine season at Mobile began April 1 Dr Edward Francis, who is in charge at Fort Morgan, will have personal charge of the entire quarantine plant

Senn in Mobile—At the annual meeting of the Medical Association of the State of Alabama, the Jerome Cochrane lecture was delivered April 17, by Dr Nicholas Senn, Chicago, whose topic was "The Final Triumph of Scientific Medicine"

Society Meeting—At the annual meeting of the Coosa County Medical Association, held April 2, Dr William A Holloway, Lauderdale, was elected president, Dr Cecil K. Maxwell, Kellyton, vice president, and Dr Eugene Argo, Goodwater, censor

College Notes—The trustees of the University of Alabama, at a session in Tuscaloosa, took over the Medical College of the University of Alabama, Mobile, and discussed plans for the improvement of the university——The commencement exercises of the Medical Department of the University of Alabama (Mobile Medical College) were held April 15, when a class of thirty was graduated The dean of the faculty, Dr Rhett Goode, delivered the address and the president, J W Abercrombie, of the University of Alabama, presented the diplomas to the graduates——Birmingham Medical College graduated a class of fourteen April 4 T G Bush delivered the address of the evening Dr Benjamin L Wyman, dean of the college, presented the diplomas and Dr R. M Cunningham delivered the charge to the graduates

ARIZONA.

To Safeguard Health in Territory—Dr James W Coleman Tucson, recently appointed superintendent of public health for the territory, has sent out letters to the different clerks of the county boards of supervisors, asking their cooperation in the concerted effort he is endeavoring to make against contagious diseases and their needless spread.

Society Meeting—The Maricopa County Medical Society, at its annual meeting, held in Phoenix, April 6, elected the following officers President, Dr James M Swetnam, vice-president, Dr John W Foss, secretary treasurer, Dr Elmer C Bond, delegate to the territorial association, Dr Ancil Martin, alternate, Dr John W Foss, and censors, Dr William I Simpson, Otto E Plath and John W Thomas, all of Phoenix

ARKANSAS

"Drummers" Fined.—Dr James Anderson, Hot Springs, pleaded guilty on March 28 to violating the local anti drumming ordinance He was fined $25 and his license revoked——Dr W W Mercer, Hot Springs, on April 8, was fined $100, and his license revoked on account of violation of the anti drumming ordinance He gave notice of appeal

Society Meetings.—The Garland County Hot Springs Medical Association at its regular monthly meeting, April 2, elected the following officers President, Dr Oliver H Burton, vice presidents, Drs Albert H Tribble and Morgan F Mount, secretary, Dr Joseph S Horner, treasurer, Dr Randolph Brunson, delegates to the state association, Drs Arthur U Williams and Frank W Jelks, and alternates, Drs Oliver H Burton and Eugene C Hay, all of Hot Springs——At the annual meeting of the Howard County Medical Society, held in Nashville, Dr Cadwalader W Wright, Buck Range, was elected president, Dr Evan M Black, vice president, Dr William H Toland, Mineral Springs, secretary treasurer, Dr David A Hutchinson, Nashville delegate to the state society and Dr James M Daly Nashville, alternate——The physicians of Siloam Springs have organized what is to be known as the Physicians' Post Graduate Medical Club

CALIFORNIA.

Hospital News—Drs Charles C and Curtis O Falk have opened temporary quarters for the Marine View Hospital in the old Murray Hospital, Eureka——The Bird Haven Home for the Feeble Minded and Incompetent has been incorporated at San Jose with a capital stock of $75,000——The new Southern Pacific Hospital, San Francisco, is to be constructed of reenforced concrete and will have accommodation for 200 patients

COLORADO

Society Election.—The Woman's Medical Society of Denver at its annual election April 5, elected Dr Laura L Liebhardt president, and Dr Mary Hawes, vice president Dr Eleanor M

Lawney, the retiring president, gave an address on "Causes of Death"

State Board Officers—The State Board of Health at its first meeting April 8, organized for the biennium Dr William H. Davis, Denver, was elected president, Dr Minnie C T Love, Denver, vice-president, Dr Hugh L Taylor, Denver, secretary, and Dr Frank N Carrier, Canon City, treasurer

Reappointments.—Dr Matt R Root, Denver, has been reappointed surgeon general of the Colorado National Guard, and Dr Samuel B Scholz, Denver, inspector general——Drs Seymour D Van Meter, Carey K Fleming, and T Willis Miles, all of Denver, have been reappointed members of the Seattle Board of Medical Examiners

CONNECTICUT

Sanitarium Burned.—The Grand View Sanitarium, South Windham, was destroyed by fire early on the morning of April 6 There were 16 patients in the institution at the time, one of whom was burned to death

Gifts to Medical School and Hospital.—By the will of the late Gen Samuel E Merwin, New Haven, $5,000 is devised to Yale University for the use of the medical school and $25,000 is bequeathed to the New Haven Hospital

Elections—At the monthly meeting of the Celtic Medical Society of Waterbury, held March 25, Dr Bernard A O'Hara was elected president, vice Dr Edward W McDonald, deceased, and Dr Thomas J Kilmartin, vice president, to fill vacancy——At the annual meeting of the New London County Medical Society, held in Norwich, April 4, the following officers were elected President, Dr Harry M Lee, New London, vice president, Dr Morton E Fox, Uncasville, clerk, Dr Edwin C Chipman, New London, delegates to the state society, Drs George R. Harris, Norwich, and Carlisle F Ferrin, New London, councilor, Dr Edward P Brewer Norwich, county reporter, Dr Patrick J Cassidy, Norwich and censors, Drs Charles E Brayton Stonington, William Witter, Norwich, and Lewis S Paddock, Norwich

GEORGIA

Personal.—Dr Francis M Ridley, La Grange, has been appointed surgeon of the La Grange Division of the Atlanta, Birmingham & Atlantic Railway——Dr William C Pumpelly, Macon, has been seriously ill with pneumonia——Drs James B Baird and William S Elkin have resigned from the medical staff of Grady Hospital, Atlanta

Hospital Notes.—It is reported that the officers and employés of the Southern Railway will build in Atlanta a hospital to cost $200,000, for the treatment of railway men and their families, as a memorial to the late Samuel Spencer, president of the road——St Mary's Hospital has been established in Athens by Drs Henry M Tullilove and J Peebles Proctor

Children and Teachers to be Examined.—At a recent meeting of the ordinance committee of the City Council of Atlanta it was decided to report an ordinance requiring the medical examination of all pupils and teachers of the public schools once a year, the examination to be made by a ward physician except where a parent or guardian prefers the services of the family physician

IDAHO

Personal.—Dr Hugh V Scallon has been elected mayor of Cœur d'Alene——Dr Hugh France, Wardner, has been appointed physician of Shoshone County

Epidemic Diseases—The public school of Genesee has been closed on account of the prevalence of mumps, measles and chickenpox——A number of cases of smallpox discovered in Wallace has caused the suspension of all public meetings in the city until further notice

Society Meeting—At the annual meeting of the South Idaho District Medical Society, held in Boise, April 4, the questions of prophylaxis of tuberculosis and insurance examination fees were discussed The following officers were elected President Dr Jesse C Woodward Payette vice president, Dr Adolph Blitz Boise, secretary treasurer, Dr John M Taylor, Boise, members of the executive committee Drs James A Young, Caldwell and William B Lyman Boise The society endorsed the candidature of Dr Edward E. Maxey, Boise for secretary of the State Board of Health and of Dr Orfila J Allen Bellevue, as a member of the State Board of Medical Examiners

ILLINOIS

Personal.—Dr William R Parkes has been reappointed health commissioner of Evanston——Dr Wilfred H Gardner, Bloomington, has gone to Germany

Interne Examination.—An examination was held April 11 at Cook County Hospital, for internships at the Cook County Institutions, Dunning The board was composed of Drs William L Baum, O C Willhite, Charles E Kahlke John D Robertson and J B Caldwell

Hospital Notes.—Riverview Hospital, Kankakee was opened to receive patients March 25 Dr James Dougherty, Chicago, is house physician of the institution and the attending staff is made up of Kankakee County practitioners——The Oak Park Hospital was formally opened by Bishop Muldoon April 4 Dr John W Tope representing the hospital staff

Legislative Notes—The osteopathic bills (house 318 and 319), are on the order of second reading in the House of Representatives No hearing seems to have been given on these bills in the committee The osteopaths behind these bills are making a determined effort to force their passage but the legislative committee of the Illinois State Medical Society and the Illinois State Board of Health are making an equally determined effort to see that they shall not pass——The anti vivisection bill (senate 267) is now on first reading in the House of Representatives——The optometry bill (now house bill 845) is on second reading in the house——The medicine peddlers' bill (senate 341 and house 474) are still in the house committee on license of the house, in which it is believed they will remain

Chicago

New Health Commissioner—A committee of physicians requested by the mayor to select a candidate for health commissioner, at an adjourned meeting, April 13 fixed on Dr William A Evans for that position Mayor Busse has appointed him to the office

Howard Kelly in Chicago—The Nicholas Senn Club had as its guest of honor, April 15, Dr Howard A Kelly of Johns Hopkins University Baltimore who read a paper on "The Recent Advance Work on Genitourinary Affections" Among the speakers were Drs Henry T Byford Emil Reis and Franklin H Martin Dr Lucy Waite acted as toastmaster

Memorial Hospital.—The Council of the Chicago Medical Society, at a meeting, April 9, unanimously endorsed the establishment of an emergency hospital in the central portion of the city, to be known as the Iroquois Memorial Hospital The hospital is to be, save in name, a branch of the Cook County Hospital and in return for the use of its name, the Iroquois Memorial Association has agreed to contribute the $2[illegible],000 already collected and such other sums as may be raised by members of the association

Personal.—Dr Joseph B DeLee has gone to Europe for a four months trip——Dr Clarence L. Wheaton delivered the public address on tuberculosis, April 15, at Shelbyville under the auspices of the Shelby County (Ind) Medical Society——Dr Gustavus A Fischer was robbed of his watch and $6 in money April 10——Dr Horatio S Brewer was seriously injured by a collision with a street car April 10, while pursuing pickpockets who had robbed him——Dr Charles S Bacon returned April 13 after a two months' trip abroad

Mortality Still High.—During the week ended April 13, 717 deaths were reported, equivalent to an annual death rate of 17 74 per 1 000 Of the 31 deaths in excess of those reported during the previous week 12 of the decedents were under one year of age and 15 over 60 years of age The death rate represented an increase of 4 5 per cent over the preceding week and of 15 04 over the corresponding week of 1906 Pneumonia caused 132 deaths consumption, 73 heart disease 60 violence including suicide and nephritis each 51 acute intestinal disease 41 and cancer 36 Of the communicable diseases, scarlet fever caused 9 deaths measles and diphtheria each 8 whooping cough, 6, typhoid fever 5 and influenza

INDIANA

Communicable Diseases—The postmaster at Lafayette is ill with smallpox and the post office is under quarantine——On account of the prevalence of scarlet fever the grade schools in Peter burg have been ordered closed

Personal.—Dr W[illegible] Bluffton [illegible] March 28 to jo[illegible] man[illegible] Arctic——Dr [illegible] erated on last w[illegible]

Physicians' Building—An office building, five stories high, is to be erected, at a cost of $100,000, at Meridian and New York Streets, Indianapolis The building is to be used exclusively for offices for physicians and dentists

Library Association Formed—At a recent meeting of the Fort Wayne Medical Society, the Fort Wayne Medical Library Association was formed, with Dr George W McCaskey as president, Dr Benjamin P Weaver, secretary, and Dr Alfred L S Kane, treasurer

IOWA

Local Society Organized.—At a meeting of the physicians of Fort Madison, March 26, a local medical society was organized, with Dr Frank C Roberts, president, and Dr William C Kasten, secretary

Personal.—Dr Charles Palen has been re elected city physician of Dubuque——Dr Joseph M Emmert, Atlantic, has been nominated by the governor as a member of the Board of Pardons and Parole——Dr Frederick Albert has been appointed city physician of Mason City, vice Dr Channing E Dakin

Tuberculosis Bills—The bill appropriating $50,000 for the completion of the main building for the hospital for consumptives at Sanitarium, near Iowa City, has been passed by the legislature The bill includes an annual appropriation of $5,000 for the dissemination of literature on tuberculosis

MARYLAND

Banquet of the University Alumni.—The first banquet of the General Alumni Association of the University of Maryland was held in Baltimore, April 10 Among the medical speakers was Dr E Miller Reed The proposition for a University Club met with much favor, and a committee of 100 was appointed to raise an endowment fund.

Hospital for Colored Patients—The Union Hospital Association, an association of colored people of Frederick, has purchased and equipped, at a cost of $30,000, a building soon to be opened as a hospital The house has eight rooms, two of which will be used as public and four as private wards The operating room is supplied with the equipment of the Emergency Hospital, which has ceased to exist Dr William G Bourne, Frederick, is house physician

Baltimore.

Fulton Resigns—Dr John S Fulton, for ten years secretary of the State Board of Health, has resigned to become secretary of the International Conference on Tuberculosis He will make his headquarters at Washington, D C

Hospital Report.—The report of St Joseph's Hospital for 1906 showed that during the year 2,525 patients were admitted, all but 898 of which were free patients The percentage of deaths was 4 75 In the dispensary 9,811 patients were treated and 10,050 prescriptions were filled

State Society Meeting—The one hundred and ninth annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in Baltimore, April 23 to 25 The subject of the address of the president, Dr Hiram W Woods, will be "The Medical and Chirurgical Faculty Its Debts to Itself and the Public" The annual oration will be delivered by Dr George H Simmons, Chicago, on "The Campaign Against the Domination of Therapeutics by Commercialism" A special meeting is to be held after the oration, the object of which is to set before the members the need of a new faculty home and the means of obtaining it The subject will be presented by Dr Edward N Brush, chairman of the building committee, and Dr Robert W Johnson, chairman of the council At the afternoon session, April 25, there will be a joint meeting of the Maryland State Conference of Charities and the Maryland State Conference of Womens' Clubs At this session the social evil will be discussed by Dr Prince A Morrow, New York whose subject will be 'The Prophylaxis of Social Diseases" Dr Lilian Welsh will speak on the 'Prophylaxis of Social Disease in the Home," and Dr Charles B Emerson, who will take up the "Duty of the Organized Medical Profession in Fighting the Social Evil" The annual banquet will be held in Faculty Hall on the evening of April 25

MASSACHUSETTS

Supreme Court Sustains Verdict—The Supreme Court of Massachusetts has sustained the verdict of $1 700 obtained by Dr John Fitzhugh Amesbury against the Boston & Maine Railroad for injuries received by the plaintiff at a railroad crossing in Amesbury

Hospital Wing Opened—The new surgical wing of the New England Deaconess' Hospital, Longwood, Boston, was opened with appropriate ceremonies April 8 The new building has a capacity for 44 patients and is furnished with a double suite of operating rooms The property as it now stands has cost $150,000, and $30,000 additional is necessary to cover the cost of the completed and equipped building

Gifts to Hospitals—By the will of the late Jabez K Montgomery, $5,000 is bequeathed to the Rufus S Frost General Hospital, Chelsea——The late Eliza D Dodge, Worcester, in her will gave $5,000 to the Worcester Memorial Hospital and $1,000 to the Baldwin Hospital Cottages——By the will of the late Mrs Eliza Orne Ropes, $5,000 is bequeathed to the Salem Hospital

Medical Men Organize.—The Boston Society of Examining Physicians and Surgeons was organized April 3, at a meeting of a number of physicians connected with different semi public corporations and life insurance companies The following officers were elected President, Dr Francis D Donoghue, vice presidents, Drs Frank E Allard and Edward M Greene, secretary, Dr Charles T Cutting, and treasurer, Dr Charles O Kepler

Smallpox—At Lawrence seven additional cases of smallpox have developed, making a total of 38——The 15 immigrants who were detained on the arrival of the steamship *Cymric*, on account of smallpox, have been released from the detention hospital——Seven new cases of smallpox have been discovered in Chelsea, and the isolation hospital now contains eight patients All the cases are said to be directly traceable to the epidemic at Lawrence

Personal—Dr S Alphons Daudelin, Worcester, has been selected as United States commissioner at the International Maritime Exposition, Bordeaux, France——Dr John J Bartley, Lawrence, has been appointed city physician, vice Dr Timothy J Daly——Dr Roy V Baketel has been appointed school physician for Methuen——Dr J William Spooner, Hingham, has been reappointed medical inspector for Plymouth County——Dr Joseph R Charron has been made chairman of the board of health of Turners Falls

MICHIGAN

President Buhl Dies—Theodore D Buhl, president of Parke, Davis & Co, Detroit, died April 7

Personal—Dr Walter H Sawyer, Hillsdale, is reported to be in a serious condition from septicemia, due to an operation wound——Dr George E Reycraft has been elected mayor of Petoskey——Dr William W Lathrop, formerly in charge of the Jackson Sanitarium, had a narrow escape from death when his clothing became entangled in the shafting of the engine room of the institution, April 3——Dr Malcolm E. Smith, Grand Rapids, has started for Katalla, Alaska, where he will be house surgeon in the new Pierpont Morgan Hospital——Dr Robert B Armstrong has been elected mayor of Charlevoix

Hospital Notes—Dr Ernest M. Vardon has sold his hospital at Hillsdale to Dr Arthur G Doty, and will move to Alberta——The Kalamazoo Hospital Association has raised already more than $11,000 of the $25,000 needed to wipe out the debt of the institution——At a citizens' meeting of Calumet the disposal of the Ernest Bollman cash donation of $20 000 and four lots for a hospital location was considered It is the intention of the committee to raise a like sum, that a hospital large enough for the needs of the community may be erected——The State Sanatorium for Tuberculosis, Howell, was ready to receive patients April 1 It was then able to accommodate 100 patients

MISSOURI

Banquet to Medical Members of General Assembly—The program for the banquet to the medical members of the Forty fourth General Assembly of Missouri by the St Louis Medical Society and the Medical Society of City Hospital Alumni in recognition of the good work accomplished in state legislation, has been arranged for April 26 at 8 p m, at the Planters' Hotel Tickets may be had of any member of the committee and from the officers of the societies Dr George Homan is chairman of the committee, Dr Adolph G Schlosstein treasurer, Dr Stewart, secretary Dr William G Moore will officiate as toastmaster It is expected that the governor the president of the senate, the speaker of the house ten or more members of the senate and house, the presidents of all the state medical societies and the president of the State Board of Health will be guests of honor on this occasion

Hodgen Memorial Meeting—Arrangements for the memorial meeting in St Louis in honor of the twenty fifth anniversary of the death of Dr John T Hodgen, a former president of the American Medical Association, to be held in the Y M C A Hall, April 28, are being rapidly perfected Dr Warren B Outten will preside as chairman of the committee of arrangements The exercises will begin at 3 p m, and will be as follows

Invocation Rev Samuel J Nicolls
Address Dr Hodgen as a National and International Figure in Medicine Joseph M Mathews M D Louisville Ky
Address His Educational Influence in the Mississippi Valley Edward W W Schauffler M.D Kansas City Mo
Address The Debt of Missouri to His Example and Memory Charles H Wallace M D, St. Joseph, Mo president Missouri State Medical Association
Address His Power and Influence as a Teacher Over His Classes Henry C Fairbrother M D East St. Louis Ill
Address His Worth as a Citizen Charles Nagel Esq of the St. Louis Bar
Address His Executive and Administrative Abilities in Public and Private Stations Le Grand Atwood, M.D, Ferguson Mo

NEW MEXICO

Railway Hospital to be Built.—It is reported that the El Paso & Southwestern Railroad Company will build a large hospital for the use of its employés at Alamogordo

Insane Asylum Bonds Authorized—The trustees of the New Mexico Insane Asylum, Las Vegas, have been authorized to issue bonds to the amount of $105,000 for needed improvements

To Report Contagious Diseases—At the March meeting of the Donna Ana County Medical Society a motion was adopted that the society strongly advise parents and good citizens immediately to report to their family physician or the health officer any or all cases of diseases of whatsoever nature, that they may be investigated and proper precautions taken

Infirmary for Silver City—Mr Frank G Thomson has presented the New Mexico Cottage Sanatorium for the Treatment of Tuberculosis with the necessary funds for the building of an infirmary This building will complete the original scheme for the institution with the exception of a research laboratory There are now 50 buildings of durable cement construction Almost all of the funds needed have been presented to the institution

NEW YORK.

State Charity Board Officers.—The State Board of Charities, at its annual meeting, elected William Rhinelander Stewart president and Stephen Smith vice president, both of New York City

Senate Passes Bills—The senate has passed the medical unification bill which provides for one state board of medical examiners instead of three, as at present, and the Armstrong bill making an appropriation of $1 000 for a commission to select a site for a new state hospital for the insane

Mary Putnam Jacobi Fellowship—The Woman's Medical Association of New York has raised $25,000 to be used for a fellowship to bear the name of Dr Mary Putnam Jacobi The income of the fund will be used to pay the expenses of a woman medical student who wishes to study abroad.

Physicians' Club Organized—At a meeting of the physicians of Newark, April 4 organization was effected and the following officers were elected President Dr Augustus A Young, vice president, Dr Jared A Reed secretary, Dr William H Jessup, and treasurer, Dr Edward P Thatcher

Personal—Dr John C Otis has been appointed commissioner of public works at Poughkeepsie——Dr John L Heffron has been appointed acting dean of the Syracuse University, Medical Department, during the absence of the dean, Dr Gaylord P Clark who has gone to Europe——Dr William D Peckham has been appointed health officer of Utica

To Limit Expert Testimony—Assemblyman Moreland has introduced a bill to limit expert testimony of alienists in all murder trials where insanity is pleaded as a defense The bill also prevents hypothetical questions being asked in any criminal case where insanity is a defense The idea is to do away with experts who receive enormous fees and seem prone to testify as the side which retains them wishes

Medical Legislation—Governor Hughes has signed the following bills The Rogers bill making appropriations for state hospitals by which Binghamton Hospital gets $50 000 for a new dining room and kitchen $81 000 for a nurses home and $7,500 for water supply, Middletown Hospital gets $81 000 for a nurses' home Hudson River Hospital $81 000 for a nurses home, and Kings Park Hospital, $62 000 for a new laundry—Mr Boshart's, providing that prosecutions for penalties for violations of the agricultural law may be brought in the county where the product is exposed for sale or in the county in which the adulteration or violation occurred—Mr Prentice's, incorporating the society known as the Russell Sage Foundation for the purpose of maintaining a fund and applying the income to the improvement of social and living conditions in the United States—Mr Wainwright's authorizing Port Chester to raise a tax of not more than one tenth of 1 per cent for public health purposes

New York City

Personal—Dr Monta Waynefort Jamison, Middleton, has returned after an extensive tour of Europe——Dr Charles E McBurney has been spending the winter in California for his health

Competition for Hospital Positions.—Four salaried positions on the resident staff of the Seton Hospital, Spuyten Duyvil New York City, are open for competitive examination, April 29 Application should be made to Dr Lewis F Frissell, 113 East Fifty sixth Street, New York City

Contagious Diseases.—There were reported to the sanitary bureau for the week ending April 6, 415 cases of measles, with 21 deaths, 392 cases of scarlet fever, with 16 deaths, 386 cases of tuberculosis, with 211 deaths, 319 cases of diphtheria, with 38 deaths, 92 cases of typhoid fever, with 18 deaths, 74 cases of whooping cough, with 12 deaths, 18 cases of cerebrospinal meningitis, with 10 deaths, 73 cases of varicella and 4 of small pox, making in all 1,773 cases, with 326 deaths

Society Election.—At a meeting of the Brooklyn Medical Society the following officers were elected President, Dr Hugh E. Rogers, vice president, Dr William H Rankin, recording secretary, Dr Alfred E Shipley, corresponding secretary, Dr Edward W Wright, treasurer, Dr Edwin A Hatch, librarian, Dr Lewis E Meeker and trustees, Drs Algernon T Bristow, Alfred Bell, James W Ingalls, William B Brader, John H Droge James C Kennedy, John D Sullivan, Elias H Bartley and Richard W Westbrook

Opposition to Free Eyeglasses.—A number of protests against supplying free eyeglasses to school children with defective vision were made at the last meeting of the Board of Education The Association for Improving the Condition of the Poor believes that to supply eyeglasses would be both demoralizing and pauperizing, and would fail to remove the cause of defective vision Similar protests were also entered by the City Club the Brooklyn Bureau of Charities, the Children's Aid Society the Brooklyn Children's Aid Society, and several other organizations

Medical Instruction for East Side—The American Life Saving Society has just established a medical bureau under the direction of Dr G Fish Clark The aim of the bureau will be to instruct parents in the crowded districts of the city how to protect themselves and their children from disease Advice and instruction on first aid to the injured sanitation and hygiene will be given without charge to all who will come to the bureau in the afternoon between 5 and 6 o'clock Five lectures on these subjects will also be given at the city baths by Dr Clark and Superintendent Brennan

The Typhoid Scare—It has practically been determined that the typhoid outbreak at Katonah was due to contamination of the village water supply by Italians employed at Cross River Dam No new cases have been reported but it seems that there have been thirteen cases in all——The increase in the number of typhoid cases in Manhattan has been so sharp since the middle of March that the county medical society has called the attention of its members to the fact For the week ended March 30 there were 106 cases with 12 deaths in Manhattan, and for the first week in April there were 18 deaths as compared with 6 deaths from this disease for the corresponding week of last year The boiling of all water used for drinking purposes has been advised

The Milk Question—The committee of public health of the Board of Aldermen which has been holding public hearings on the milk question decided at a special meeting April 11 in favor of the ordinance which if passed will require that the milk from every dairy supplying New York shall be tested by the Health Department once a month and that any milk showing over 500 000 bacteria to the cubic centimeter will have to be pasteurized before being sold There are many other points to the measure, but it is said that it will not be signed by the mayor until he has heard from the special commission which is investigating the matter This commission [illegible] not yet reported but it is said that it will [illegible] ill be in[illegible] voked The state is supposed [illegible] [illegible]

cattle and to pay the owners a certain part of their value, but the appropriation has not been large enough to carry out this provision of the law A bill is being prepared for presentation to the legislature sometime during the coming week requiring the reporting of illness among employés in dairies, and sickness among cows If employés are found to be ill they must be segregated If cows are ill they are to be killed and the owners will receive compensation for them The bill also provides an appropriation for recompense to cover the latter part

Centennial of the New York College of Physicians and Surgeons—The College of Physicians and Surgeons of New York is just passing its one hundredth anniversary The charter bears the date of March 12, 1807 The first class graduated in 1811, this year also being notable for the induction into office as president of Dr Samuel Bard, who had been the physician of George Washington and a former dean of the medical faculty of Columbia College Two years later, 1813, this school absorbed the entire medical faculty of Columbia College, thereby increasing the strength and prestige of the teaching body General medical and surgical clinics to supplement bedside instruction were inaugurated through the efforts of Dr Parker in 1841 Practical work in obstetrics began in 1853 while about the same time the chair in physiology and pathology was created and placed under the charge of Dr Alonzo Clark, who had just completed a course of postgraduate study in pathology in Paris In 1878 an event of special historic interest was the establishment of a student laboratory for instruction in pathology with Francis Delafield as its director A nominal union between the College of Physicians and Surgeons and Columbia College was ratified in June, 1860, but it was not until November, 1891, that the actual union of the two institutions took place The course of study was at least two years of five months each until 1878, when the time was extended to seven and one half months In 1887 the course was again extended to three years of eight and one half months each until 1894, when four years of eight and one half months each were required This centennial anniversary will be celebrated at the coming commencement of Columbia University, June 10 12 A special number of the *Columbia University Quarterly* is largely devoted to the medical work containing leading articles by Profs L Emmett Holt, Frederick S Lee, Walter B James, Francis Carter Wood, M. Allen Starr and George S Huntington It is a valuable addition to the literature of historical medicine

NORTH CAROLINA.

State Hospital Directors Meet—At a recent meeting of the directors of the State Hospital for the Insane, Morganton, Dr P L Murphy was reappointed superintendent, and Drs John McCampbell and James K Hall, assistant physicians

Society Meeting—At the annual meeting of the Haywood Medical Society the following officers were elected President, Dr Rufus L Allen, secretary treasurer, Dr J Howell Way, and delegate to the state association, Dr J Rufus McCracken, all of Waynesville

OHIO

Graduate School Opened.—The Graduate School of Cincinnati, whose teaching force is made up from the faculty of the Medical College of Ohio, with which it is connected, opens for its first session this spring

Physicians Swindled.—It is reported from Akron, April 11 that about 30 physicians of that town have been swindled by two men who represented themselves to be agents for a collection agency and induced physicians to sign notes of $100 each, entitling them to membership in the agency

Election.—The annual meeting of the Akron Medical Club was held April 4 when the following officers were elected President Dr Le Roy C Eberhard, vice president Dr H. Irving Cozard, secretary, Dr Edmund A Weeks and treasurer Dr James G Grant This club is organized along the line of promoting the social side of medical life

Milk Commission for Toledo—The president of the Academy of Medicine of Toledo and Lucas County has appointed Drs William C Chapman Charles W Moots and Homer H. Heath to serve with Dr I Howard McVay representing the Toledo Homeopathic Society the secretary of the Woman's Clubs and the secretary of the Chamber of Commerce to secure a better milk supply for Toledo

Personal—Dr O M Pinney Madisonville has been appointed by the Presbyterian Board of Foreign Missions as medical missionary to Benito West Coast of Africa——Dr Adolphus W Poertmeyer has been appointed receiving physician at the City Hospital Cincinnati vice Dr A E Osmond resigned——Dr John B Woodworth Delaware secretary of the Delaware County Medical Society, has resigned and left for Texas

PENNSYLVANIA.

State Hospital Burned.—On April 8 the State Hospital for the Insane, Norristown, was destroyed by fire A majority of the patients have been transferred for temporary lodgment and care to the insane department of the Philadelphia Hospital

Society Meeting—The North Penn Clinical Society composed of physicians practicing in towns along the North Penn Railroad, was organized at Quakertown, March 13 The following officers were elected President, Dr Josiah E Bauman, Telford, vice presidents, Drs Oliver H. Fretz, Richland Center, and John J Ott, Pleasant Valley, secretary, Dr Walter H Brown, Richlandtown, assistant secretary, Dr Francis A. Borzell, Cressman, and treasurer, Dr Alfred E Fretz, Sellersville

The Medical Board Bill.—The Bowman bill remains in the house judiciary general committee in the hope that a change of sentiment will take place in favor of the measure The bill was introduced primarily to elevate the standard of Pennsylvania medical practitioners There are 54 civil divisions in the United States, including Porto Rico, Hawaii and the Philippines, of which 39 have single medical boards while only 12 have three boards In Pennsylvania there are at present three boards, regular, homeopathic and eclectic, each of which examines graduates of medical colleges belonging to its particular school If an applicant fails to pass one board he can apply for an examination before another board and so receive a license Representative Bowman's bill provides for a single examining board of 10 physicians selected from the regular, the homeopathic, the eclectic and the osteopathic schools, to be appointed by the governor, no school having a majority of the entire board The objectors to the bill say that the examining boards should be composed of 12 members three representatives from each of the four schools The regular profession insists that this should be left to the discretion of the governor

Philadelphia

Cerebrospinal Meningitis.—The presence of a number of cases of cerebrospinal meningitis in different sections of the city during the last two weeks has caused alarm among health officials Since April 6, 14 cases of the disease have been reported to the bureau of health and 4 deaths from the disease have been reported

Hospital Applies for Aid.—The Hospital of the Woman's Medical College of Pennsylvania has issued an appeal for aid because it is doing a great work for the sick poor and yet is hampered by insufficient temporary quarters, having no private rooms as a source of income and no endowment fund The hospital asks for money and annual subscriptions for the endowment fund or for the building fund

Personal—Dr J William White, professor of surgery at the University of Pennsylvania, has been elected advisory surgeon of the Pennsylvania Railroad Company Dr White will have supervision of the medical corps of the system——Dr William W Keen has been elected an honorary member of the German Surgical Society He is at present in Berlin, a delegate to the surgical congress being held there

Hospital Cornerstone Laid.—On April 9 occurred the laying of the cornerstone of the new Frankford Hospital Previous to the ceremony addresses were made by James S McMasters who presided Representative Samuel Christian, Congressman W W Foulkrod and Dr J Baker Laird Isaac Schlichter, chairman of the building commission, laid the cornerstone The new building will be a two-story brick structure with provision for the addition of two stories

TENNESSEE

Graduation—The fifty sixth annual commencement exercises of the University of Nashville, Medical Department, were held March 29 when a class of 52 was graduated Chancellor James D Porter of the university presided, and Dr L M King delivered the faculty address

Society Meeting—At the annual meeting of the Nashville Academy of Medicine and the Davidson County Medical Society held at Nashville April 2 Dr George W Crile Cleveland, Ohio delivered the address of the evening on "Direct Transfusion of Blood" The following officers were elected President, Dr Marvin M. Cullom, vice president Dr Rufus F Fort secretary treasurer Dr Holland M Tigert, and delegates Drs William D Haggard, John A Gaines and Sidney S Crockett all of Nashville

TEXAS

Fire Losses.—On March 16 the office of Dr Robert S Foster, Northrup, was destroyed by fire with a loss of more than $1,000——The Denton County pest house, five miles south of Denton, was burned April 1, with a loss of about $300

WISCONSIN

Smallpox.—It is reported that there are 40 cases of small pox at Manawa, a number of cases have also developed at Royalton

Personal.—Dr and Mrs Victor F Marshall, Appleton, sailed for Europe on the *Minnetonka* from New York, April 6——Drs Frank P Donahue and Oscar Lutz, internes at the Emergency Hospital, Milwaukee, have resigned——Dr Joseph Lewis, Milwaukee, who has been ill at the Hanover Hospital for three months, has recovered.

Tuberculosis Sanatoria—Dr Chester A Paull, superintendent of the new State Sanatorium for Tuberculosis, Wales, reports that the sanatorium will be opened about June 1, when from 80 to 100 patients can be accommodated.——The Milwaukee Sanatorium for Tuberculosis Association has taken possession of its property on the Blue Mountain Road. Plans for two pavilions have been completed and the administration building is now ready for use

Hospital Notes—Drs William M. Gratiot and H D Ludden have opened a hospital at Mineral Point——A meeting was held at Portage, April 6, to discuss the matter of a hospital for that city and to form an organization Dr William J Thomson was elected permanent secretary, and the ways and means of defraying the cost of a hospital were discussed. The consensus of opinion was that a hospital to meet the needs of Portage should cost from $15,000 to $20,000

GENERAL

Tuberculosis Sanatorium in Porto Rico—The tuberculosis sanatorium founded at San Juan by the Anti Tuberculosis League of Porto Rico was dedicated April 5 by Governor Winthrop

New Medical Society—The Mexican physicians in Monterey, Mexico on April 4, effected a permanent medical organization to be known as the Nueva Leon Medical Society A constitution and by laws were adopted.

Havana Physicians Protest.—The physicians of Havana held a meeting recently and entered a protest against the activity of Governor Magoon in licensing two American physicians to practice medicine in Havana who had not first passed an examination in the University of Havana, as required by law

National Boards of Health Conference—The fifth annual conference of State and Territorial Boards of Health with the Public Health and Marine Hospital Service will be held in Washington, D C, May 31, 1907 These conferences are convened in accordance with the act of Congress approved July 1 1902, "increasing the efficiency of the Marine-Hospital Service" The subjects to come before this conference for discussion will be "Sanitary Supervision of Milk Supplies," 'Malaria its Geographical Distribution," and "Bacillus Carriers' The last named important subject is attracting much attention at present

American Pediatric Society—This society will hold its nineteenth annual meeting at Washington, D C, March 7 9 1907 The headquarters and meeting place will be the Arlington Hotel Among the subjects on which papers will be read are 'The Caloric Value of Modified Milk" Dr Maynard Ladd, Boston, "Cane Sugar Feeding in Its Relation to Some of the Disorders of Childhood," Dr Charles G Kerley New York, 'Kerning's Sign in Infancy, a Study of Two Thousand Cases" Dr John Lovett Morse Boston, "Bacteriology in Meningitis" Dr F S Churchill Chicago, "Grip Meningitis" Dr Samuel S Adams Washington "The Rest Treatment in Chorea" Dr John Ruhräh Baltimore, "Etiology of Infantile Atrophy' Dr A H Wentworth Boston Further information may be had from the secretary, Dr Samuel S Adams, 1 Dupont Circle Washington D C

Association of American Medical Colleges.—The annual meeting of this association will be held in Washington May 6 The president's address will be given by Dr George M Kober Washington The topics taken up will be "Giving Credit for Work Done in Literary Colleges, the Combined Course" by Dr Egbert LeFevre New York 'The Advancement of Medical Education" by Dr Murray Galt Motter Washington "Should Examinations for Licensure be in Two Parts and How Shall They be Conducted?" by Dr William J Means Columbus Ohio "Teaching Internal Medicine" by Dr William S Thayer Baltimore "Teaching Materia Medica, Pharmacology and Therapeutics," by Dr Torald Sollmann, Cleveland, Ohio, 'Teaching Anatomy," by Dr Frank S Baker Washington, and "When Shall Students Begin to Attend Clinics?" by Dr Frank E Bunts, Cleveland, Ohio

American Academy of Medicine—The thirty second annual meeting will be held at Atlantic City, N J, June 1 and 3, 1907 The secretary is Dr Charles McIntire, Easton, Pa Some of the papers on the program are to be on the following subjects

President's Address A Medical Career and the Intellectual Life Dr Casey A. Wood, Chicago
The Communal Life of Physicians Dr Leartus Connor Detroit
The Housing Problem Drs S A. Knopf and Gertrude C Light New York City
The Effect of Child Labor on Physical Development Dr Alfred Friedlander Cincinnati.
The Superiority of the Playground to the School room, Dr Woods Hutchinson Arrowhead Cal
The Soldier as a Total Abstainer Dr J W Grosvenor Buffalo
Insurance for Defectives Dr James A Spalding Portland Me.
State Examining Boards Dr Henry Beates Jr Philadelphia
Relations of the Medical and Legal Professions to the Public, Dr T H Shastid, Marion Ill
Legislation to Promote Preventive Medicine Dr Benjamin Lee Harrisburg
A National Department of Health Dr J Pease Norton New Haven
Criminal Abortion Dr Henry W Cattell Philadelphia

Obliterating a Yellow Fever Focus in Cuba.—Dispatches published in the reports of the U S Public Health Service give an account of the prompt and energetic measures adopted to suppress a focus of yellow fever that has been discovered in Havana Province, Cuba The reports show that the disease in the single case reported was contracted at a plantation in the vicinity of Nueva Paz, a town of 2,000 inhabitants situated about 45 miles southeast from Havana The patient, a Spaniard, who has been removed to Las Animas Hospital, Havana, arrived in Cuba last December, and after ten days' stay at Havana, went to Nueva Paz, where he remained continuously until taken sick Dr Stansfield of the Public Health and Marine-Hospital Service reports that a disinfecting and oiling brigade of forty men, under experienced supervision, has been sent to Nueva Paz to exterminate mosquitoes, and that the work of sanitation will be extended to all places in the vicinity Major Kean, adviser to the Cuban Sanitary Department, stated, April 2, that Havana is free from yellow fever, and inasumch as the present case was imported, there is no reason to fear infection in that city The only other case of yellow fever, a fatal one, reported in Cuba during the present year occurred in January at Santa Clara, capital of the province of the same name

CANADA

New Western University—Alberta is to have a provincial university at Strathcona

Cremation—Cremation is growing in Montreal, where is located the only crematory in Canada There were 33 cremations from the commencement of operations in 1901 until April 2, 1906 and 13 from that date until Feb 28 1907 Prior to the establishment of the McDonald crematory there had been 12 by the Mount Royal Cemetery

Hospital News.—The late Mrs Peter Redpath of Montreal left the Montreal General Hospital $40,000——A new quarantine hospital will soon be ready for occupation in Winnipeg Man——A psychiatric clinic is to be established in connection with the proposed new general hospital for Toronto It is intended that it shall occupy a separate building have accommodation for 100 patients and treat acute cases of mental disease

Checking Consumption in British Columbia—The annual meeting of the Anti Tuberculosis Society of British Columbia was held in Victoria April 2 Dr Fagan the municipal health officer of British Columbia who has the matter of the erection of a sanatorium in charge announced that there are nearly sufficient funds in sight to proceed with building operations He has collected $10 000 in Vancouver where the medical profession alone subscribed $2 800 About $10 000 is still needed before the necessary $50 000 is secured

Personal—The Manitoba Board of Health has been appointed as follows Dr R M Simpson Winnipeg chairman Drs John M Eaton John A Macdonald F L Schaffner and Gordon Bell——It is announced that the government will appoint Dr Thompson M P of Dawson commissioner of the Yukon at a salary of $5 000 with $6 000 for living expenses——Dr Andrew Eadie of Toronto was assaulted by the father of a former patient who died of appendi[illegible] the [illegible] of a heavy teamster's whip was the instr[illegible] He has lain unconscious at his home

April 8 ——Major Leonard Vaux, M.D, P.A.M C, Toronto, will be Canada's representative with the imperial army at Aldershot and later on at the Royal Army Medical College at London. He will take up a course for the next year in bacteriology and hygiene ——Dr Halfpenny, Winnipeg, is doing graduate work at Johns Hopkins University

FOREIGN

A Hospital on the Mount of Olives—The foundation stone of the new German hospital on the Mount of Olives was laid March 31, 1907 The Sultan of Turkey gave the land

A New Medical Mission in India—A new medical mission has been started in Parbhani, in the Nizan country, by the United Free Church of Scotland The Murray Mitchell Hospital and dispensary buildings are to be erected at this place

Appropriations for Scientific Purposes in Germany—Among the appropriations recently voted by the German parliament is $50,000 for repression of typhoid fever and $30,000 for tuberculosis, $16,000 for study of sleeping sickness, $17,500 for the approaching International Congress for Hygiene at Berlin, September 23 29, $25 000 for research on syphilis, $6,500 for investigation of the statistics of accidents and $10,000 for combating infant mortality

The "Preventive" Theater—In order to continue the anti venereal campaign, Le Vallier and Nigel of Paris have organized evening entertainments at a small theater, rue Saint Denis 133 "The Initiation" is the name given to the entertainment First there is a two act play called "The Immolated," the plot turning on a case of syphilitic sterility The second part is a lantern talk on syphilis, with numerous views The organizers of the show do not seem to be physicians, but they admit physicians free on presentation of their visiting cards

Pharmacy in Turkey—The United States Consular and Trade Reports state that there are 400 pharmacists in Constantinople and quotes a local pharmacist as follows "Physicians, with the fear of having their prescriptions transformed by doubtful dispensers, are wont to order medical specialties which offer guaranties of careful preparation" Although this may be an exaggerated view, there is, nevertheless, the Reports state, a growing demand for medical specialties As late as ten years ago advertising had little or no effect on the sale of such specialties but this is no longer the case, and the importance of keeping before the public in an intelligent manner by means of advertising in the principal local journals, by posters in the streets stations and public places, is increasing and becoming recognized by those interested.

Training School for Disinfectors—In Prussia during 1905 about 64 official nine day courses of lectures on practical disinfection were given at 17 different points, 533 persons attended the lectures, and 533 passed the examinations and received certificates as officially tested disinfectors Besides the above courses a number of three day courses were held for nurses, and about 200 nurses were thus trained for the disinfecting service especially for continuous bedside disinfection while the licensed disinfectors were trained especially for the terminal disinfection Every three years the licensees must submit to further tests and take another course of lectures at the end of six years Steam disinfection apparatus are preferred to formalin apparatus as a rule The *Münch med Wochschr* mentions further that applicants must be under 45

Quinin Tannate Candy for Children—The Academy of Medicine, Rome Italy recently passed a resolution asking the government to have quinin tannate in the form of chocolate drops, distributed for the use of children in malarial regions Zeri Concetti and others related very favorable experiences with it Contrary to other preparations of quinin the tannate is borne well even when there is considerable vomiting and diarrhea is favorably influenced It is evidently tolerated better by the intestinal canal as it is less bitter and less toxic A child affected with hemoglobinuria every time quinin was given under any other form tolerated the tannate chocolate drops and was thus soon cured of malaria Viale proclaimed its advantages as long ago as in 1852 The vote was, therefore taken asking that the tannate in this form be sold at cost price or distributed free to children like the other preparations of quinin for adults

Plague in India—Consul General Michael at Calcutta reports that the plague mortality is increasing in the Punjab at the rate of 1 000 deaths a week He also quotes the report of the health officer of Calcutta that experiments at inoculation in India have been somewhat discouraging In Calcutta an offer of 16 cents each to all who had themselves inoculated had so little effect that only 101 inoculations were made during the year Attempts to exterminate the rats were equally disappointing, although 4 cents each were offered for live rats Altogether about 100,000 rats were accounted for, but this does not seem to have made much impression on the rat population All species of rats seem to be liable to the disease, so that attempts at destruction must include all kinds The extermination of the rodents and the consequent abolition of plague is likely to be a difficult task which will take a generation or two, but it should not be deemed hopeless

Improved Records of Criminal Statistics in France—According to new regulations, the statistics of crimes in France will in future strive to take account of the physical conditions, the individual conditions and the social conditions which are at the basis of a given crime, so far as they can be determined The physical conditions include climate, nature, soil, season, the individual, age, sex, origin, profession, etc, and the social, density of the population, poverty, wealth, etc Further than this, each record is obliged to mention whether the offense had been committed under the influence of liquor, and whether the criminal is a habitual or occasional drinker The statistics for 1905 show that 2,294 criminals were declared to be irresponsible In issuing his orders the minister of justice urged research into the past of the criminal, his heredity, his education, environment, the causes of his fall and means of redemption If by this means, he said, the magistrate, in concert with the medicolegal experts, can work back from the crime to its pathologic origin, justice will be enlightened and the cause of science promoted An editorial in the *Semaine Méd*, from which we quote the above, states that the statistics collected henceforth in France will be more complete and hence more valuable than those of any other country

Resignation of Danish Board of Health.—Meyer writes from Copenhagen to the *Münch med Wochschr* stating that on March 5 the Royal Board of Health (kgl Gesundheitsamt) sent in its resignation as a body, signed by all the members of the board This body was organized in 1803, and has charge of all sanitary and public health matters, and its members serve without pay During the last five years it has been entirely ignored by the minister of justice, who has drawn up bills, made appointments, etc without consulting the public health office in any way The bill for repression of venereal disease, recently described in these columns page 1119, was drawn up and passed without consultation with it, as also the bills in regard to repression of tuberculosis and other health matters The board presented a detailed list of grievances to the king in an official communication three months ago, to which the minister replied, on the floor of parliament, in sarcastic terms Nothing remained for the members of the board but to resign which they have accordingly done As no other physician will accept a position on the board as matters now stand, the country is without an official health bureau The lack of expert medical supervision is evident Meyer says, in the antivenereal law mentioned above, especially its sanitary features The medical profession fears that some of the provisions of the law will shake the confidence of the patient in his physician whom he will look on more as a police officer than as a confidant and friend

Half a Million Vaccinated in Paris in Fifteen Days—France always has a number of cases of smallpox each year at different points, in 1904 there were 1,000 cases in 15 departments, but the populace has never taken this condition of affairs seriously, and the measures requiring vaccination have never been strictly enforced. A few cases of smallpox occurred recently at Dunquerque, and three out of the four nurses who came in contact with the first patient died. The small epidemic was promptly arrested but the Paris press wrote it up and a remarkable smallpox scare resulted The people crowded by thousands to be vaccinated, Chantemesse estimates that nearly 500,000 were vaccinated during the first two weeks The *Académie de Médecine* in commenting on this curious page of history in this year of our Lord 1907, called attention to the drawbacks of such hasty, wholesale vaccinations The law in Prussia forbids more than 130 vaccinations at one sitting, and in Baden no more than 150 can be vaccinated in one day The necessity for legislation in France compelling vaccination of the floating population, sailors, day laborers temporarily employed and the like, was earnestly pleaded by Kelsch The power of the press, he added has been illustrated once more by this "delirium for vaccination" which it induced by writing up the half dozen cases at Dunquerque, while the populace has never been roused from its inertia before by the thousand odd cases occurring on all sides every

year Men, women and children fought for the vaccine which the week before they had regarded with sublime indifference, as will probably be the case also a month from now Kelsch commented further on the aid which the press might render to sustain the efforts of physicians in keeping alive this fear of smallpox which is the beginning of wisdom

LONDON LETTER.

(From Our Regular Correspondent)

London, April 6, 1907

The Use of Alcoholic Beverages

A controversy on this subject has been started in the medical and in the lay press by certain eminent members of the profession Apparently, they are dissatisfied with the pronouncements, which have recently been made by men equally eminent, deprecating almost entirely the use of alcohol and the marked tendency to its disuse which has been much in evidence of late Sir Victor Horsley, who is the most prominent teetotal advocate of the profession, recently stated at the Toronto meeting of the British Medical Association that alcohol is being rapidly superseded by milk in London hospitals The following manifesto has been issued and signed by some of the most prominent physicians and surgeons "In view of the statements frequently made as to the present medical opinion regarding alcohol, we think it desirable to issue the following statement, which we believe represents the opinions of the leading clinical teachers as well as the great majority of medical practitioners Recognizing that in prescribing alcohol, the requirements of the individual must be the governing rule, we are convinced that in disease alcohol is a rapid and trustworthy restorative In many cases it may be described as life preserving, owing to its power of sustaining cardiac and nervous energy, while protecting the wasting nitrogenous tissues As an article of diet, we hold that the universal belief of civilized mankind that the moderate use of alcoholic beverages is, for adults, usually beneficial, is amply justified We deplore the evils arising from the abuse of alcohol But there is nothing, however beneficial, which does not by excess become injurious" It need not be said that such a manifesto has not been allowed to pass unchallenged by the opponents of alcohol, who include names in the profession equally eminent. A counterblast has been started in the *Lancet* by Sir James Barr and others Sir James Barr states that he is anxious to get reliable information as to the power of alcohol to sustain cardiac and nervous energy He prescribes it simply as a sedative and antispasmodic to paralyze the vasomotor system, much in the same way as he does nitroglycerin We are only at the beginning of what threatens to be a very hot controversy It is a curious comment on our boasted progress that the leaders of the profession should be so diametrically opposed regarding the use of a remedy as old as civilization, the experience of the use of which is incalculably great and concerning which an enormous number of experiments on man and animals have been made It is unfortunate that the controversy should have extended to the lay press, but this was rendered inevitable by the publication of the manifesto there Once more the differences of the profession will become a subject of jibe for the public. Worse still, unfounded imputations have begun to be cast on the signers of the manifesto, such as How many of the signers hold brewery or distillery shares? and, How many cases of Scotch whisky does the manifesto represent?

VIENNA LETTER.

(From Our Regular Correspondent)

Vienna, April 3, 1907

Damages Recovered for Sepsis Resulting from Having Corns Cut in a Public Bath.

A remarkable case was decided recently by the court of appeals A merchant in the prime of life asked for damages on the ground that he had been infected when having his corns cut in a bath by the men paid by the proprietors of the bathing establishment to perform this small operation on the visitors It appeared that the possibility of having the corns cut by a "specialist" attracted many persons to that special bath and that the merchant in question, who was operated on in the bath soon afterward complained of pain in his leg, which became swollen and painful Although medical aid was called in, sepsis was inevitable and the leg had to be amputated below the knee. The court decided that the proprietors were responsible for their employés and that the fact of medical aid having been sought at once proved clearly that there had been no negligence on the part of the sufferer Therefore, the claim of the plaintiff was justified and he was awarded damages to the amount of $2,000 The proprietors were at the same time severely reprimanded for not carrying out the city ordinance in regard to bathing establishments, which requires the presence of a medical man during certain hours of the day on the premises for the purpose of controlling all instruments and apparatus used for massage, inhalations etc

Women Eligible to the Posts of Senior and Junior Hospital Officers

By the appointment of a woman to the post of "Secundärarzt" in a children's hospital, a new and important step has been taken by our very conservative hospital administration, which hitherto has constantly ignored the presence of fully qualified medical women and the useful work done by them in their inofficial positions as "Aspirant" or "Hospitant," both expressions meaning nothing more than "a tolerated guest" The prejudice was so strong in many quarters that even Professor Albert, the famous surgeon, did not allow female students to work at his clinic. Several petitions have been forwarded to the ministry of the interior at different times, but the rules of the Vienna University give so much independence to both the professors and the students that the minister felt unable to interfere The increased recognition accorded to the work done by women physicians has prompted first one and then another of the holders of the university chairs to appoint a medical woman as their assistant, and at last the medical women have been found to do just as valuable work as the men The government now makes no further distinction between the male and female sex when it is a question of merit

Investigations into the Hygienic Conditions of School Children

The institution of medical inspectors of schools, only a recent addition to the administration of our schools, has already rendered good service in investigating the reasons of the insufficient physical fitness of many children, especially in large towns One of the foremost causes has been found to be insufficient sleep, more than 20 per cent of all the children go to bed after 10 p m, and the difference between the actual length of sleep and the time spent in bed ran up to one hour and forty minutes or 20 per cent of the time This is explained partly by the bad habit of keeping the children awake, or by unhygienic surroundings Only from 30 to 40 per cent of the children sleep alone, the remainder have to share the bed with one or two or even with more persons Bathing is a luxury which only 10 per cent of the children can have at home The school baths are doing very good work in this respect, and bathing facilities are now installed in nearly every school In only very few class rooms can all the windows be opened, in most school rooms the windows have to be closed because of the street noise The bad effects of short sleep, bad air and also of inadequate nourishment combine to make the children anemic and less vigorous The remedies recommended by the medical inspectors are Better ventilation, by opening the windows every hour for at least ten minutes, opening school at 9 instead of 8 a m, and distribution of free meals to those children who need it

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Association News

OFFICIAL CALL

The Fifty Eighth Annual Session of the American Medical Association, to be Held at Atlantic City, N J, June 4 7, 1907

To the Officers and Members of the Constituent State and Territorial Associations of the American Medical Association

The fifty eighth annual session of the American Medical Association will be held at Atlantic City, N J, on Tuesday, Wednesday, Thursday and Friday, June 4 5, 6 and 7, 1907

THE HOUSE OF DELEGATES

The House of Delegates of the American Medical Association will convene at Atlantic City, N J at 10 a m on Monday, June 3, 1907 The representation in the House of Delegates of the various constituent associations for the years of 1907, 1908 and 1909 will be as follows

Alabama	3	Montana	1
Arizona	1	Nebraska	[illegible]
Arkansas	2	New Hampshire	1
California	3	New Jersey	[illegible]
Colorado	2	New Mexico	1
Connecticut	2	New York	11
Delaware	1	Nevada	1
Dist. of Columbia	1	North	[illegible]
Florida	1	North	1

Georgia	2	Oklahoma	2
Hawaii	1	Oregon	1
Idaho	1	Pennsylvania	8
Illinois	7	Rhode Island	1
Indiana	4	South Carolina	2
Iowa	3	South Dakota	1
Kansas	3	Tennessee	2
Kentucky	3	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	3
Massachusetts	6	Washington	1
Michigan	4	West Virginia	1
Minnesota	2	Wisconsin	3
Mississippi	2	Wyoming	1
Missouri	4	Philippine Islands	1
Ohio	6		

The twelve sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health and Marine Hospital Service are entitled to one delegate each

FIRST GENERAL OR OPEN MEETING

The first General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10 30 a m, Tuesday, June 4

REGISTRATION DEPARTMENT

The Registration Department will be open from 8 30 a m until 5 p m, on Monday, Tuesday Wednesday and Thursday June 3, 4, 5 and 6, and from 9 to 10 a m on Friday, June 7

WILLIAM J MAYO, President
GEORGE H SIMMONS, General Secretary

THE ATLANTIC CITY NUMBER

The Annual Professional Writeup with Programs and Full Details of the Session

The May 4 issue of THE JOURNAL will be the annual special number giving the preliminary programs of the sections, lists of headquarters, hotels, meeting places, railroad rates, excursions and other data of interest to those who will attend the fifty eighth annual session of the American Medical Association in Atlantic City, N J, June 4 to 7, 1907 Between 75 000 and 60 000 copies of this special edition will be distributed Any one who has data concerning special parties, plans for stopovers excursions and other matter of interest to the members should send in this information at once

To answer questions that are being asked about headquarters for the various sections we repeat from THE JOURNAL, February 23 the following list

HEADQUARTERS

GENERAL HEADQUARTERS MARLBOROUGH BLENHEIM
PRACTICE OF MEDICINE Hotel Dennis
SURGERY AND ANATOMY Hotel Chalfonte
OBSTETRICS AND DISEASES OF WOMEN Haddon Hall
DISEASES OF CHILDREN Hotel Traymore
NERVOUS AND MENTAL DISEASE Hotel Brighton
OPHTHALMOLOGY Hotel Seaside
LARYNGOLOGY AND OTOLOGY Hotel Strand
PATHOLOGY AND PHYSIOLOGY Hotel Shelburne
HYGIENE AND SANITARY SCIENCE Hotel St Charles
PHARMACOLOGY AND THERAPEUTICS Hotel Marlborough.
CUTANEOUS MEDICINE AND SURGERY Hotel Marlborough
STOMATOLOGY Hotel Traymore

General headquarters for registration, information, commercial exhibits and the Scientific Exhibit will be on Young's Pier

Atlantic City is preparing to give those who attend the coming session in June even better accommodation than heretofore, there being more hotels and larger ones than when the Association last met in Atlantic City Special attention is being given to locating the section headquarters in hotels directly on the beach front and contiguous to the Boardwalk The section meeting places are being grouped as closely together as rooms providing commodious accommodation can be obtained It will be the endeavor of the Trustees' committee, ably assisted by the auxiliary committee, to provide for the members of the Association the greatest amount of comfort possible within a short radius, and at a minimum expense

The secretary of the Committee on Hotels is Dr W E Jonah 1616 Pacific Avenue

Correspondence

Certain Medical Aspects of Jury Trials

PROVIDENCE, R I, April 15, 1907

To the Editor —Whenever any distinct fault with a public institution becomes evident to the medical profession, it becomes the duty of this profession to manifest its views to the proper authorities and to call for a remedy The methods of certain commonwealths in the disposition of their convicts, the relations of convict and ordinary labor, the hygiene of prison life—all have been passed in review of late and discussed by professional and lay writers, but as yet the conduct of jury trials has not been regulated or to any extent criticised

Now it must be evident to any fair minded person that 20, 30 and even 40 hours of constant discussion and deliberation is too much for any person, that no person after the lapse of such a period of thought is capable of sound judgment, and that any issue decided by jurors who have passed their usual periods of repose and sleep is decided by men with warped judgment, tired minds and muddy intellects Let any physician ask himself what his judgment would be worth after 20 hours of deliberation on any one subject Let him at such a time try to recall even fundamental questions on professional subjects Would his views on any subject be worth hearing, or would he dare offer any opinion on which human life or liberty were at stake? Let the profession tell if the jury in any hard fought criminal case is capable of sound judgment in such distinctly unhygienic surroundings as invariably obtain I wish to protest with all my power against such conditions and to suggest a remedy, and I predict that thinking people will in time see the *rationale* of this philosophy It is not necessary to quote from neurologists as to the ability of the human mind to stand mental strain This is only too evident to any intelligent person Why, then, should not juries, on whose judgment hangs the question of life or death, of success or ruin and of financial loss or gain, conduct their deliberations in a sensible manner, with suitable provisions for rest, with regular meals and with stated periods of sleep They will do their work better and in a shorter time, and we shall read no more accounts of haggard men, with voices cracked and high pitched from exhaustion, wrangling and striving to arrive at a conclusion which might have been reached long before, were the jurors in better physical condition The remedy A day of 12 hours, or, at most, 14 One half hour recess after each three hours of work, with provision for a change of air in the work room and for a short walk in fresh air A bedroom with cots for sleeping, with regular hours allotted, and bathrooms for those who would use them Let the public understand that under such conditions its welfare would be better served, let the prisoner know that under present conditions his sentence may be unjust and that under proper conditions justice is more sure, and let a jury take four days of 12 hours each to decide a murder case rather than one of 40 hours The medical profession should discuss this important matter and, if it sees fit, urge on legislators and on the people a change as important as it is radical Then no innocent man will suffer through the personal fatigue of an overtired jury, and jury trials will be purged of at least one of their undesirable attributes

W LOUIS CHAPMAN M D

Disclaimer for "American Medical Syndicate"

PHILADELPHIA, April 13, 1907

To the Editor —I am informed that one or more persons in Washington, D C, are endeavoring to interest physicians in the "American Medical Syndicate," whatever that may be, and are stating that I am largely interested in it To the best of my recollection I never heard of the syndicate before, or of any one connected with it H A HARE

Pharmacology

CAMPHO PHENIQUE

Report of the Council on Pharmacy and Chemistry

The following report was submitted to the Council on Pharmacy and Chemistry by the subcommittee to which Campho Phenique had been assigned

To the Council on Pharmacy and Chemistry — Campho Phenique, sold by the Campho-Phenique Co, St Louis, Mo, is claimed to be composed of phenol 49 per cent, and camphor 51 per cent.

Examination of specimens, purchased in the open market, made under our direction, demonstrate that the statements made in regard to the composition are not true Instead of containing 49 per cent of phenol (carbolic acid), the analysis showed that it contains not more than 20 per cent Instead of containing 51 per cent. of camphor, the analysis demonstrates that the amount of camphor is not more than 38 per cent Besides phenol and camphor, a third substance was found which proved to be liquid petrolatum and to be present to the extent of 38 per cent or more.

Since the statements made in regard to the composition of Campho Phenique are deliberate misrepresentations of the facts, it is recommended that the article be not approved.

Besides Campho Phenique, the above mentioned firm also sells a preparation labeled Campho Phenique Powder While no statement in regard to the composition of this product is made on the label or in the literature, such expressions as "Campho Phenique in a powdered form" and "Powdered Campho Phenique" lead to the inference that it has essentially the same composition as that stated for the liquid preparation An examination of a specimen of Campho Phenique Powder purchased in the open market showed that 92 per cent of it was a talcum like inorganic substance The remaining 8 per cent. consisted chiefly of camphor with a small amount of phenol

In view of the fact that Campho Phenique Powder contains very little phenol, but instead consists chiefly of an inorganic talcum like substance, its name is misleading and deceptive It having been shown that Campho Phenique Powder corresponds to a camphorated talcum powder, the claims that it "has no equal as a dry dressing," that it is "absolutely superior to iodoform," and that it has "all the excellent properties of aristol and iodoform," are unwarranted It is recommended that the article be not approved, and that this report be published

The recommendations of the subcommittee were adopted by the Council, and in accordance therewith the above report is published W A. Puckner, Secretary

The above report on a much advertised "ethical" proprietary medicine is worthy of the thoughtful consideration of the members of the medical profession, as it illustrates admirably some of the conditions connected with this proprietary medicine business

THE FORMULA A FAKE

First it illustrates the fact that the published formulas of the 'ethical' proprietaries are not always reliable The Campho Phenique Company has been very willing to give out a formula, purporting their product to be 51 per cent. camphor and 49 per cent phenol (carbolic acid) Now, these two drugs will make a liquid mixture, and any druggist can make it and the mixture will have about the same consistency and appearance as Campho Phenique But its effect differs decidedly from that of Campho Phenique Some months ago a very intelligent physician, in discussing the proprietary medicine business said that in some cases physicians could not get druggists to make preparations which were as satisfactory as those which could be bought ready made He cited Campho Phenique as an illustration He said that he had used this preparation for burns, etc but as he did not like to use preparations put up by companies about which he knew nothing, he asked his druggist to make the mixture in accordance with the published formula The druggist's preparation was not satisfactory it had a decidedly different effect from Campho Phenique, and so he tried another druggist This druggist also followed the published formula, but his results, too, differed materially from the proprietary article.

The various analyses that have been made show why the preparation put up by the druggist did not resemble that made by the company, since, according to the analyses, Campho Phenique consists of 40 per cent liquid petrolatum, which is an inert but soothing diluent, while instead of 49 percent of carbolic acid, as claimed, it really contains less than 20 per cent This is an entirely different proposition. Now, if the physician referred to above will have his druggist make a mixture of 20 per cent of carbolic acid, 40 per cent of camphor and 40 per cent of liquid petrolatum, and will then compare this resulting compound with Campho Phenique, he will find that there is not much difference Furthermore, he will realize that there is nothing either new or wonderful about the preparation Camphorated oil and carbolized oil are both in common use Campho Phenique is apparently simply a mixture of the two

THE POWDER STILL WORSE

So much for the liquid The powder seems to be something entirely different for according to the chemist's report, over 90 per cent of it is an inert absorbent, talcum like material There is enough camphor and carbolic acid to give the powder an odor and thus mislead physicians, especially those who are in the habit of taking for granted that whatever statements nostrum manufacturers make are true Perhaps it is a fairly good dressing for wounds—at least it will do no harm—but its name is misleading and deceptive For all practical purposes it is essentially a camphorated talcum powder

THE CAMPHO PHENIQUE COMPANY A "PATENT MEDICINE" CONCERN

The second interesting phase of this "ethical" proprietary is that it illustrates another point, i e, that many of these articles are supplied to our profession by those who are not legitimate manufacturing pharmacists The Campho Phenique Company of St Louis, according to all reports, is owned and controlled by a gentleman named Ballard This "company" supplies the medical profession with the preparations under consideration and also with chloro phenique and scrofonol We are informed that this same Mr Ballard is the principal owner if not the sole owner, of quite a number of "patent medicine companies, such as Ballard Snow Liniment Co, Brown's Iron Bitters Co Mayfield Medicine Mfg Co, Smith Bile Beans Co Swain's Laboratory, and several others. We learn from the wholesale drug trade lists that these various "companies' make and sell, beside the campho phenique preparations, Ballard Snow Liniment, Ballard's Herbine, Brown's Iron Bitters Dr Merrick's Pills, Richardson's Life Preserving Bitters, Smith's Bile Beans Swain's All Healing Ointment, and several other patent medicines"

It is hardly necessary to make any further comments The whole business is nauseating to those who know the actual conditions of this nostrum business and how our profession is being deluded The Campho Phenique matter is not an exception it is simply another illustration of these conditions

The majority of 'ethical" proprietaries are foisted on our profession either without any formula accompanying them, or with a 'formula" that is a fake The majority of the 'ethical" proprietaries are manufactured and supplied to physicians, with instructions regarding their use, by men who bear the same relation to legitimate pharmacy that the veriest quack that ever swindled a credulous public bears to scientific medicine

The Council on Pharmacy and Chemistry Encourages Reform

In explanation to manufacturers whose products have been refused recognition the Council directs publication of the following statement W A Puckner, Secretary

Some manufacturers, whose products have been rejected by the Council have taken issue with this action on the ground that they were not given sufficient opportunity to comply with the requirements This can only arise from ignorance of the methods of the Council in these cases and seems to call for an explanation In the first place, the Council does not like to reject any article, but prefers to see every product brought up

to its rules, and appreciates every attempt which manufacturers make in this direction The rules have been public for over two years, which would seem ample time for compliance if the proper efforts had been made, but the Council stands ready to accept reforms even at this late date, and, indeed, at any time in the future

When the Council determines to take up an article, this is generally assigned to a subcommittee, which prepares a report from the available evidence This examination and report bear only on the article as it is marketed *at the present time*, and *not* on what it has been in the past or what it may become in the future, except that an unsavory past will naturally enjoin great caution in judging the present status of an article

The report generally carries a recommendation whether the article shall be accepted or rejected, or final action delayed A temporary suspension of judgment is recommended if the committee believes that the manufacturer is willing to reform objectionable features If intentional fraud is discovered, the Council proceeds as it sees fit If the objections are such as could be removed by proper reforms, the manufacturer is first informed of the decision of the Council, and the reasons there for are given, generally in the language of the original report This gives him an opportunity to file a reply or to take exception If no reply is received, or if the reply contains nothing which could affect the decision of the Council, in the opinion of the committee, the article is considered definitely rejected, in its present form The Council, however, is always ready to reconsider its decision, and to examine the article again, as soon as evidence is submitted that an honest effort has been made to remove the objectionable features In other words, the fact that an article has been rejected does not mean that it will never be accepted On the contrary, the Council aims to give all reasonable opportunity for reform To this end, it has not thus far published its adverse findings as long as reform seemed possible (save in case of fraud and some other extreme instances) By furnishing to the manufacturers its specific reasons for rejection, it shows the direction in which reform is to be made This, we believe, is all that should be necessary, and is as far as it would be wise for the Council to go It can not be expected, and it would not be wise, for the Council practically to dictate the wording of the advertising matter, as has been asked by some, or to point out the very minimum of the changes which would be needed to bring a product up to he letter of the rules A manufacturer must expect to be guided by the spirit of this movement if he intends to adhere merely to the technicalities, he will be sure to infringe, sooner or later, intentionally or unintentionally Such an attitude is not desirable If he really wishes to reform he should plan to meet the objections of the Council to the fullest extent, and then ask to have his product reconsidered Moreover, while the Council can not be expected to judge hypothetical cases, it stands ready to give an unofficial opinion as to whether contemplated changes will satisfy its requirements

Another objection which is frequently raised is that the Council is arbitrary and autocratic in its interpretation of Rule 6 "No article will be admitted or retained of which the manufacturer or his agents make unwarranted, exaggerated or misleading statements as to therapeutic value" It is self evident that questions of therapeutic value are often largely matters of opinion, and that the Council s judgment must then be more or less arbitrary It is equally evident, however, that a line must be drawn somewhere, for disregard of the spirit of this rule has been mainly responsible for the "patent medicine" evil, and, indeed, suffices to class an article as a "patent medicine" The Council does its utmost to be absolutely fair in drawing this line, and whenever it judges that there is a sound basis for difference of opinion it inclines to give the manufacturer the benefit of the doubt, to discount his natural enthusiasm for his product On the other hand, the manufacturer should remember that the Council is in a sense in a better position to judge therapeutic questions without prejudice for it has no interest in the matter, one way or the other except to arrive at the truth

With every wish to be liberal however, the Council would not be doing its duty if it were to accept claims which have been disproved, or which are impossible, or excessively improbable Doubtful claims can only be passed if a sufficient body of evidence from reliable observers is presented, to relieve the Council from responsibility, the quality and quantity of the required evidence being proportional to the improbability of the claims Nor should manufacturers expect the Council to accept as evidence the statements of men whose sole contributions to medical literature consist in the endorsements of nostrums Certain manufacturers seek exemption for statements of which they are evidently somewhat ashamed by publishing them as quotations or extracts from correspondents, articles or discredited text books The Council can not encourage this subterfuge, and holds a manufacturer responsible for every statement which he publishes

A Food Law Development.

In the Journal, March 16, 1907, page 967, we called attention to an alleged prescription which is shrewdly advertised in newspapers as a "simple home mixture which any druggist can put up One of the ingredients, however, is a nostrum This method of advertising is one way of evading the Food and Drugs Act

A recent number of *Printer's Ink* directs attention to a similar case The preparation in this instance has been widely exploited in the lay press, largely in advertisements made to appear as though they are reading matter, and is advertised as "Virgin Oil of Pine" *Printer's Ink* says

"The preparation is put up in half ounce bottles and is recommended in connection with glycerin and whisky, in a stated formula as a remedy for coughs and colds, lung troubles, etc Under the pure food law, a cough remedy containing two and a half ounces of simple ingredients suspended in eight ounces of whisky would have to be marked with a label stating the percentage of alcohol In such a case the percentage would be large Eight ounces of whisky would be entirely truthful and not at all alarming to the purchaser, but the law prohibits such a statement and the percentage of alcohol, if stated, would appear so high as probably to cancel a good many sales where purchasers read the truthful label To overcome this disadvantage in marketing, the company advertises its preparation alone and the reader is given a formula whereby he can compound his remedy himself As the formula may be advertised without any statement of percentage of alcohol and as only whisky is mentioned, the remedy is divested of what under other circumstances might appear to be a dangerous remedy Whether or not this concern has evaded the law is a question for others to decide It has certainly got around what would have been in its case a serious commercial drawback"

Medical Advertisements in Religious Papers

The following letter received from a correspondent emphasizes the importance and the value of physicians writing to editors of religious journals regarding their advertising pages It also emphasizes the value of persistency

To the Editor —The question of the impropriety of religious newspapers accepting patent medicine advertisements is being discussed in your columns Formerly the Pittsburg (Pa) *Christian Advocate* contained such advertisements Five or six years ago I corresponded with the editor in regard to the matter and he expressed his dissatisfaction with the affair and referred me to the business manager I wrote many times to the latter party calling his attention to the fraudulent claims of some advertisements in the paper To make a long story short for over a year this class of advertising has been discontinued. I do not know that my writing hastened the matter but I believe it contributed in a measure to the change *If the physicians who are readers of the various religious journals* would take pains to enter their protest repeating such protests as often as might be necessary all such periodicals would in time be led to clean up their advertising columns

Our correspondent's views emphasize the statement which has been repeatedly made in this department No journal unless it is run exclusively and solely as an advertising sheet and is distributed gratuitously, will continue to carry advertising matter known to be objectionable to a large number of subscribers, in the face of repeated protests from those subscribers That the religious papers have been great sinners along these lines in the past is well known If physicians wish to enjoy reading a religious journal free from objectionable advertisements they have only to follow the example of our correspondent and write to the manager, and keep on writing until the paper is improved

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Kentucky State Board of Health City Hall Louisville April 23 Secretary Dr J N McCormack Bowling Green

Georgia Regular Board of Medical Examiners Capitol Building Atlanta April 30 May 1 Secretary Dr E R. Anthony Griffin

Texas State Board of Medical Examiners Austin April 30-May 2. Secretary Dr T T Jackson San Antonio

Texas Eclectic Medical Board, Dallas, about April 25 Secretary, Dr L S Downs Galveston

Tennessee State Board of Medical Examiners Memphis Nashville and Knoxville May 1 Secretary Dr T J Happel Trenton

Nevada State Board of Medical Examiners Carson City May 6 Secretary Dr S L Lee Carson City

Illinois State Board of Health, East St. Louis May 8 10 Secretary Dr J A Egan Springfield

Louisiana State Board of Medical Examiners New Orleans May 9 10 Secretary Dr F A. Larue 211 Camp St. New Orleans

Mississippi State Board of Health State Capitol Jackson May 14 Secretary Dr J F Hunter Jackson

Massachusetts Board of Registration in Medicine Room 15 State House Boston May 14 16 Secretary Dr E B Harvey Boston.

Florida State Board of Medical Examiners (Regular), Jacksonville May 15-16 Secretary Dr J D Fernandez Jacksonville

New York State Boards of Medical Examiners Albany May 21 24 Chief of Examining Division Charles F Wheelock Albany

Nebraska State Board of Health State House Lincoln, May 28-29 Secretary Dr Geo H Brash Beatrice.

Indiana Board of Medical Registration and Examination Room 120 State House Indianapolis May 28 31 Secretary Dr W T Gott Indianapolis

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Requirements for Practice in Japan.—Schwalbe reviews the requirements before physicians are admitted to practice in other countries, his article, "Zulassung im Auslande," appearing in the *Deutsche med Wochschr* Nos 1 and 12 He states that according to a law passed last May, Japan requires certain qualifications and a license from the minister of the interior before an outsider can practice medicine Four years of medical study are the minimum requirement, and the right is reserved to refuse or revoke the license in case the applicant is a minor, or deaf, dumb or blind, has been imprisoned or has been fined for medical malpractice The law provides that each physician must keep a record of all his patients, with name, age, residence, occupation, disease and treatment This record must be preserved for ten years The law further prohibits false announcements in regard to a physician's ability, and it also prohibits advertising of secret remedies by physicians According to a decree issued last September, reciprocity is allowed with foreign states which admit Japanese physicians to practice, conferring the license without examination on presentation of due credentials Great Britain, to date, he says, is the only country whose physicians can thus be admitted to practice in Japan without further red tape Schwalbe urges reciprocity agreements between Germany and suitable foreign states He is a little premature in regard to Great Britain's reciprocating with Japan, we believe, as the question is still under advisement in parliament.

North Carolina—Higher Requirements at Wake Forest.—The Medical Department of Wake Forest College has adopted the resolution that beginning with the session of 1908 9, certificates of recommendation for advanced standing in other medical colleges will be given only to students who have completed the two year medical course and also the bachelor of science or bachelor of arts course The two years work in medicine is elective in the B S degree and at the same time represents the first two years of work given in all first class medical colleges

Virginia University Adopts Higher Requirements.—The medical faculty at its last meeting passed a resolution to the following effect Beginning with the session of 1910 the minimum entrance requirements shall be the completion of two years of work in an institution of recognized collegiate standing, including satisfactory courses in physics, biology, inorganic chemistry and a language, preferably German By "satisfactory" courses is meant courses more or less equivalent to those given in the college department of the University of Virginia The administration of these requirements will be, as at present, in the hands of an academic officer, the dean of the university who passes on the entrance requirements of all the departments

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION ETC

Blue Earth County Organizes a Study Course.

Dr A G Liedloff, secretary of the Blue Earth County (Minn) Medical Society, writes

"At the September meeting of our county society we decided to take up a regular course of study Regular lessons were assigned and the chairman appointed members of the society as teachers to take charge of each meeting It was also decided to meet weekly instead of monthly as heretofore

"This plan was carried out with a fair degree of success, but, owing to the fact that one third of our membership live outside of town, it was not considered advisable to use the funds of the society nor to expect the regular officers of the society to do the work of the study class of which the physicians in the city receive the greater part of the benefit Accordingly, we organized the Study Section of the Blue Earth County Medical Society, adopting a constitution and by laws and electing special officers We began our work with 12 charter members, after issuing an invitation to all the members of the county society to join us Our by laws provide that any member of any county society, on application may become a member of the study section Dues are provided to cover actual expenses only Meetings are held weekly at the office of the quiz master

"The following outline for work has been placed in the hands of each member

March 6 Anatomy of the Chest March 13 Diagnostic Methods
March 20 Larynx and Pharynx March 27 Bronchial Tubes.
April 3 Diseases of the Pleura April 10 Pneumonia.
April 17 Tuberculosis April 24 Chronic Diseases of the Lungs
May 1 Anatomy and Physiology of the Heart.
May 8 Pericarditis and Functional Diseases of the Heart
May 15 Organic Diseases of the Heart
May 22 Diseases of the Diaphragm

A Firm Stand Against Contract Practice

Dr James J Hogan, secretary of the Solano County (Cal) Medical Society, reports the results of the stand taken by his society on contract practice Some years ago a number of fraternal orders having local lodges in Vallejo, the principal city in the county, adopted free medical services as one of the advantages of membership Contracts were entered into with various physicians of the town at a nominal figure Other organizations, seeing the advantages of such a plan also adopted it, until almost every organization in the city was offering free medical services to its members The Eagles, the Foresters, the Druids, the Maccabees, the Fraternal Brotherhood, and other orders, including even the women's lodges, furnished free medical service as one of the privileges of membership

About a year ago the society adopted a resolution pledging the members to do no more lodge practice This agreement was signed by every physician in Vallejo, both members and non members The lodges combined and imported a physician from Oakland, to whom was given all lodge work of the place He made a contract for a year At the expiration of his contract he left evidently not finding the work either pleasant or profitable Since that time two other men have been imported to do lodge work The members of the society however, have with one exception kept their agreement, and have done no lodge work whatever The member who broke the promise was expelled later At the last meeting of the society every member expressed himself as thoroughly satisfied with the year s work

Utah Completes Reorganization.

The Salt Lake County (Utah) Medical Society has adopted the standard constitution and by laws for county societies in full The *Utah Medical Journal*, in speaking of the matter editorially, says

"This reorganization plan seems eminently proper, in that the physicians are in closer touch than ever before The responsibility resting on the county societies is greater than ever before as they, and they alone are made the [illegible] qualifications of the membership of the

the American Medical Association Thus the responsibility rests where the applicant is best known The various schools of practice, so long as the fundamental requirements are the same, are less widely separated than ever before, and, as time goes on, the differences will grow less and less"

"How to Get Legislation."

The *South Carolina Medical Journal* has the following comment, which should be carefully considered by those interested in securing medical and sanitary legislation

"We all know (or ought to know if we are old enough to be practicing medicine) that legislation is not accomplished in the effulgent sunlight of a noisy public, not on the hustings of a demagogic campaign meeting, nor even (where one might suppose) on the oratorical forum of the house of representatives It is conceived, laid, and hatched, in political by ways and hedges, around the corner, on the dead quiet, with soft words and apt reasoning

We must appeal to the personnel of the legislature We must talk to our law makers in person, quietly, sensibly, and withal forcibly and with reason We may remind the legislator that we are striving to protect the public, himself included, from the appalling, if insidious, dangers of quackery and fakery, impress on him that it is not primarily for our good but for his own protection and that of his family that we ask this legislation Professional aggrandizement plays no part in this appeal We may point out to him that, as the state officially recognizes and licenses the profession of the state, surely he must agree that the associated members of the profession are best fitted to outline the necessary legislation for the preservation of the public health"

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed Queries for this column must be accompanied by the writer's name and address but the request of the writer not to publish name or address will be faithfully observed

OXYDENDRON ARBOREUM

HENDERSON OKLA, April 5 1907

To the Editor —What is *Oxydendron arboreum* and what are some of its effects and uses? I fail to find reference to it in anything at hand J T MILLS M.D

ANSWER —This plant is described in the United States Dispensatory Eighteenth edition as andromeda *Oxydendrum arboreum* sour wood or sorrel tree It grows in the valleys of the Alleghanies from Pennsylvania to Florida The leaves have a pleasant acid taste and are sometimes used by hunters to allay thirst While it is used by some as a diuretic in treatment of dropsy nothing definite is known regarding its properties.

INDUCED HYPEREMIA IN ACNE AND CORNEAL OPACITIES

IMLAY CITY MICH April 8 1907

To the Editor —I have a patient with acne and also one with a corneal opacity I wish to treat them by the so-called Bier method. Will you tell me how tight a rubber band should be applied to the neck and for what length of time it should be left on.

M B MCCAUSLAND M D

ANSWER —According to R Knapp an assistant of Bier a bandage is properly applied when the following conditions obtain There must be no discomfort felt from the bandage itself nor in the congested region In the latter there must be simply a feeling of fulness but none of tingling or as if the part were going to sleep the member should be warm and eventually become warmer than the opposite side and a bluish red color should appear but the pulse must be easily felt The rule is to apply the bandage for twenty two hours then loosen it and allow a pause of two hours after which the bandage is reapplied. Congestion of the head is secured by the use of a cotton rubber band which is 3 cm (1 1 5 in) wide for adults and 2 cm (4/5 in) wide for children The band has a row of eyelets on one side and a hook on the other so that the degree of hyperemia can be regulated by placing the hook in different eyelets If the band presses on the neck this must be equalized by padding with cotton Hyperemia induced by suction is advised by some for the eye and it would seem as if the same method would also be applicable to acne For a description and figures of some of the suction apparatus see THE JOURNAL June 9 1906 p 1804

TREATMENT OF EARACHE

CHICAGO April 2, 1907

To the Editor —One is struck on reading medical journals with the number of questions asked regarding the treatment of ear troubles I would suggest that a formula be introduced in the next Pharmacopeia for a ready made preparation suitable for the treatment of this condition As the putting of potent drugs into the auditory canal may be dangerous, the general practitioner is sometimes at a loss to know what to prescribe both as to drug and to quantity The National Dispensatory still gives the modified *Balsamum tranquillans* of the French Pharmacopeia but the U S Pharmacopeia has no formula Of course the busy practitioner will think of oil of thyme chloroform, tincture of opium, etc. but how about exact quantities? Too little will make the throbbing thumping and buzzing worse whereas too much may cause serious complications L M YOUNG M D

ANSWER —While our correspondent does not indicate what ear troubles he has in view he makes use of some expressions that lead us to suppose he means an ordinary earache, such as the general practitioner frequently meets especially in children The disease in question under such circumstances is almost invariably an acute otitis media, either catarrhal or purulent in its character Conditions of this kind have been combated by various remedies Hot applications on the outside of the ear are usually helpful Under this heading may be included hot water bags, a covered Japanese hand stove hot salt or bran bags, and considerable relief is often found from filling the fingers of kid gloves with hot salt and tying up the open ends These little bags may be laid on a dish placed on the stove until thoroughly heated then applied to the ear canal and covered with a thick cloth. In this way the heated bag comes into close contact with the tissues of the ear canal The application of steam often gives prompt relief A teacup is filled with boiling water a wad of absorbent cotton pressed to the bottom of the cup the water poured out and the cup applied over the ear Many drugs are found useful in relieving pain and earache An aural suppository, such as is manufactured by various pharmaceutical houses each suppository containing ½ grain of morphin 1 100 grain atropin and ½ grain cocain, is efficacious. These drugs are held together with coca butter They can be gently slipped into the ear and will melt with the heat of the body or their usefulness can be considerably accentuated by the application to the ear of a hot bag These suppositories seldom fail to relieve earache, provided of course that the ear canal is reasonably clean and free from ear wax, etc. A common prescription is morphia sulphate gr ½ atropin sulphate gr ⅛, rose water 3½ Two or three drops of this dropped in the ear will usually give immediate relief Cocain is sometimes added. Many other combinations might be suggested but most of them would contain one or all of the above ingredients under somewhat varying conditions These suggestions are based on the supposition that our correspondent refers to acute otitis media with earache.

SYRUPUS ANTISCORBUTICUS

CINCINNATI April 6, 1907

To the Editor —I recently found the term Syrupus Antiscorbuticus. I did not know what it was, and my library failed to enlighten me I inquired of a number of my friends both medical and pharmaceutical and they also were unable to tell me Hence I am compelled to appeal to you D S MCKEE M D

ANSWER —This preparation is official in the Swiss Pharmacopeia and in the French Codex. Hager's Handbuch der Pharmaceutischer Praxis gives the following composition

No	Ingredients	Parts	
		Swiss	French
1	Herba cochleariæ (common scurvy grass)	100	100
2	Herba nasturtii offic. recentis (water cress)	100	100
3	Radix armoraciæ recentis (horseradish root)	100	100
4	Foliorum menyanthis (water shamrock)	20	10
5	Cortex aurantii	25	20
6	Cortex cinnamomi zeylonici	10	5
7	Vinum albi	400	400
8	Alcohol 94 per cent	40	
9	Saccharum	550	500

According to the Swiss Pharmacopeia the directions for making this are as follows Ingredients 1 to 8 are macerated for 5 days in a water bath One hundred parts are distilled off the remainder is percolated and after 6 hours the clear fluid is poured off It is then boiled down to 350 parts and cooked to a syrup with the sugar The distillate is then added

TEST FOR BILE IN URINE

MINNEAPOLIS March 25 1907

To the Editor —Can you give me a reference to a test for bile in the urine in which a color reaction takes place similar to the diazo reaction on the addition of a solution of sulphanilic acid hydrochloric acid and sodium nitrite? H W ALLEN M D

ANSWER.—The test has been described by A Raphiel (*St Petersburg med Wochschr* abstracted in THE JOURNAL Jan 13 1906

115 and by Krokiewicz (*Muenchener med Wochschr* abstracted in THE JOURNAL, June 9 1906, 1808) Raphiel s test consists in using the ordinary diazo reaction He uses the two solutions commonly employed, viz., solution 1 Sulphanilic acid 5 parts hydrochloric acid 50 parts distilled water 100 parts Solution 2 Sodium nitrite 0 5 parts distilled water 100 parts The test for bile pigment can be performed in two ways viz Either a solution containing 5 c.c. of solutions 1 and 2 or 3 drops of solution 2 is first prepared and mixed with 5 c.c. of the urine to be examined. If bile pigments are present the solution will promptly assume an amethyst color that in a short time turns to cherry red. The red color is quite apparent even in greatly diluted urines or in urines containing only minute quantities of bile pigments Or the test may be performed by adding 2 or 3 drops of solution 2 to the urine and then 5 c.c. of solution 1 in this case the urine assumes a greenish or yellowish green hue that within 24 hours passes into a cherry red.

The test of Krokiewicz is based on a similar principle but he employs the various substances making up the diazo test reagent in a little different way He employs, first a 1 per cent solution of sulphanilic acid second, a 1 per cent solution of sodium nitrite third, pure hydrochloric acid. The test is performed as follows Equal parts of solutions 1 and 2 are mixed 0 5 c.c. of this mixture is added to 0 5 c.c. of the urine to be examined. If bile pigments are present the mixture of urine and reagent turns red If now one or two drops of pure hydrochloric acid are added this red color promptly changes to a violet, which remains permanent for a long time. This test is very delicate and can, if necessary, be performed with a few drops of urine or other fluid to be examined for the presence of bile

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U S Army week ending April 13 1907

Rockhill, E P asst. surgeon, granted 30 days sick leave of absence.

Boards of medical officers as hereinafter constituted are appointed to meet April 29 1907 at the places designated for the purpose of conducting the preliminary examination of applicants for appointment in the Medical Department of the Army

At Fort Jay, N Y Richard Charles surgeon Shimer I A Whitmore E R. asst surgeons

At Vancouver Barracks Wash Crosby W D surgeon Flagg, C. L B asst. surgeon

At Columbus Barracks, Ohio Raymond, H I surgeon, Ruffner D L. Metcalfe, R F asst surgeons

At Fort Monroe Va Carter W F surgeon Ragan, C A. Smith L L asst surgeons.

At Jefferson Barracks, Mo Bradley A. D, surgeon Pyles W L. Powell W A., asst. surgeons

At Ancon, Canal Zone McCulloch C C. Jr surgeon Lyster T C Crabtree G H asst. surgeons

At Madison Barracks N Y Hallock H M surgeon

At Fort Sheridan, Ill Munson E L. surgeon

At General Hospital Washington Barracks D C Howard D C Ashford B K., Huggins J B asst. surgeons.

At Fort Leavenworth Kan Fuller L A Clayton, J B Halloran P S asst. surgeons.

At Fort Porter N Y Hess Louis T asst. surgeon

At Fort Reno Okla Edger B J Jr asst surgeon

At Fort Ethan Allen Vt Robbins C P asst surgeon

At Fort Riley Kan Reno W W asst surgeon.

At Fort D A Russell Wyo Davidson W T asst surgeon

At Fort Thomas Ky Hathaway L M asst surgeon

At Fort Rosecrans Cal Huntington P W asst surgeon

At Fort Snelling Minn Webb W D asst surgeon

At Fort Logan Colo Lambert S E asst surgeon

The board will be governed by instructions from the Surgeon General of the Army to whom the reports of the boards will be rendered direct.

Newgarden George J surgeon ordered to report in person to Brigadier General Wm P Hall adjutant general president Army Retiring Board appointed by Paragraph 8 S O 239 War Department Oct. 9 1906 at such time as he may designate for examination by the board For the purpose of examining Major Newgarden the board will meet at Washington Barracks D C

Usher F M C asst surgeon granted 10 days leave of absence

Stark Alexander N surgeon granted three months leave of absence to take effect on his being relieved from duty in the Philippines Division and he is authorized to visit China and Japan

Gosman George H R asst surgeon granted two months leave of absence to take effect after his arrival in the United States and he is authorized to apply for an extension of one month

Howard, D C asst surgeon granted leave of absence for two months to take effect June 1 1907 with permission to apply for an extension of one month

Wilson W H asst surgeon will proceed in due season to Fort Porter N Y and report on arrival to the commanding officer for temporary duty as member of a board of officers to meet May 1 1907 for examination of candidates for admission to the U S Military Academy On completion of this duty he will return to Fort Hamilton N Y

Kilbourne E D asst surgeon granted 14 days leave of absence

Mabee J I asst. surgeon relieved from duty in the Philippines Division and assigned to duty in the Army transport service with station at San Francisco Lieut. Mabee will relieve Asst.-Surgeon Pinkston as surgeon of the transport *Sherman* on arrival at Manila P I

Pinkston O W asst. surgeon on being relieved from duty as surgeon of the transport *Sherman* by Asst. Surgeon Mabee will report in person to the commanding general Philippines Division for assignment to duty

Bushnell George E surgeon, is detailed to represent the Medical Department of the Army at the meeting of the National Association for the Study and Prevention of Tuberculosis to be held in Washington D C May 6-8 1907 Major Bushnell will repair to Washington in time to attend the meeting of the association and on its adjournment will return to his proper station

Morris E R. surgeon will proceed to Washington Barracks D C and report in person to the commanding officer General Hospital at that post for observation and treatment.

Gregory J C, asst. surgeon relieved from duty in the Army transport service to take effect on completion of his examination for advancement and ordered to Jefferson Barracks Mo for duty

Bosley J R asst. surgeon relieved from duty at Jefferson Barracks Mo and ordered to Fort Casey Washington for duty

Hart J W contract surgeon left Fort Hunt Va. for duty at Target Camp Annapolis Md.

Wall Francis M contract surgeon left Fort Oglethorpe Ga on leave of absence for two months

Hutson T O contract surgeon left Fort Saint Philip La for duty at proper station Fort Moultrie S C

Bell R F contract surgeon left Fort Wadsworth N Y for temporary duty as surgeon of the transport *Kilpatrick*

Woolley Herbert C contract surgeon ordered from New York City to Vancouver Barracks Wash. for duty in the Department of the Columbia.

Layley E W contract surgeon ordered from Sleepy Eye Minn to Vancouver Barracks Wash for duty in the Department of the Columbia

Navy Changes.

Changes in the Medical Corps U S Navy for the week ending April 13 1907

Langhorne C D surgeon detached from duty at the Naval Medical School Hospital and ordered to the Navy Yard Washington D C

Riggs R E P A surgeon detached from the Naval Station Port Royal S C and ordered to the *Texas*

Heiner R G asst surgeon detached from the Navy Yard Washington D C April 15 and ordered to attend course of instruction at the Naval Medical School Washington D C

Public Health and Marine Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 10 1907

Banks C E surgeon granted leave of absence for one month from about April 19 1907

Cobb J O surgeon granted leave of absence for one month or so much thereof as may be necessary on account of sickness

Wertenbaker C P surgeon granted leave of absence for 1 day April 11 1907

Stimson A M asst surgeon granted leave of absence for 7 days from April 6 1907 under Paragraph 191 of the Service Regulations

Robertson H McG asst surgeon directed to proceed to Philadelphia for special temporary duty on completion of which to rejoin his station

Salmon T W asst surgeon granted leave of absence for 1 day March 2 1907 under Paragraph 191 of the Service Regulations

Ward W K asst surgeon granted leave of absence for 2 days from March 20 1907 under Paragraph 191 of the Service Regulations

Ashford F A asst surgeon granted leave of absence for 1 day March 2 1907 under Paragraph 191 of the Service Regulations

Frost W H asst surgeon granted leave of absence for 2 days from March 30 1907 under Paragraph 191 of the Service Regulations

Kastle J H chief of division of chemistry Hygienic Laboratory granted leave of absence for 9 days from April 11 1907

Buonocore F acting asst surgeon granted leave of absence for 15 days from Jan 23 1907 on account of sickness

Delgado J M acting asst surgeon granted leave of absence for 6 days in March 1907 under Paragraph 210 of the Service Regulations

Duke B F acting asst. surgeon granted leave of absence for 3 days from April 10 1907

Griffitts T H D acting asst surgeon granted leave of absence for 21 days from April 12 1907

Kennard K S acting asst surgeon granted leave of absence for 1 day March 8 1907 under Paragraph 210 of the Service Regulations.

Schwartz, Louis Acting asst surgeon granted leave of absence for 2 days March 3 and 10 1907 under Paragraph 210 of the Service Regulations.

BOARD CONVENED

A board of medical officers was to meet at New Orleans April 9 1907 for the examination of an alien immigrant Detail for the Board Surgeon J H White chairman P A Surgeon L L Wilson Acting Asst Surgeon J T Scott recorder

Health Reports

The following cases of smallpox yellow fever and plague have been reported to the Surgeon General Public Health and Marine Hospital Service during the week ended April 12 1907

SMALLPOX—UNITED STATES

California San Francisco March 24 20 1 case

Kansas Topeka March 16 20 2 cases

Massachusetts Lawrence, March 23-30 19 cases
Minnesota Winona March 23 30 2 cases
Missouri St. Joseph, March 22 29 10 cases
New Jersey Newark, March 23 30 2 cases.
New York 11 Counties, Jan. 1 March 2, 56 cases Broome County epidemic.
North Carolina Greenboro March 23-30 3 cases
Ohio Canton March 2 9 2 cases March 25-31 1 case
South Dakota Sioux Falls March 23-30 1 case.
Tennessee Nashville March 23-30 1 case
Virginia Richmond March 23-30 1 case.
Washington Spokane March 23-30 12 cases
Wisconsin La Crosse March 23 30 1 case

SMALLPOX—FOREIGN

Brazil Bahia, Feb 16-March 9 6 cases, Pernambuco Feb 1 15 64 deaths
Canada New Brunswick Kent County March 23-30 present Nova Scotia Antigonish County present Colchester County present Digby County present Halifax County, present Pictou County present Yarmouth County present.
China Hongkong Feb 16-March 2 31 cases 24 deaths
Ecuador Guayaquil Feb 16-28 5 deaths
France Canne Feb 1 28 1 case 1 death.
Italy General March 7 2 34 cases
Mexico Guerrero State March 27 epidemic.

SMALLPOX—INSULAR

Philippine Islands Manila, Feb 23 March 2 2 deaths

YELLOW FEVER.

Brazil Manaos March 2 16 6 cases, Para, March 9 16 4 cases 2 deaths
Cuba Habana April 5 1 case (origin Nueva Paz)
Ecuador Guayaquil Feb 16-28 13 deaths
Mexico Merida March 17 23 2 cases 1 death
West Indies Trinidad Port of Spain March 8-16 1 case 1 death

PLAGUE—INSULAR

Hawaii Honolulu April 7 1 death
Brazil Bahia Feb 16 March 9 10 cases Pernambuco Feb 1 15, 3 deaths
Peru Chiclayo Feb 28 4 cases 4 deaths Eten 6 cases 4 deaths Lambayeque 2 cases 1 death San Pedro and Pacasmayo 2 cases Trujillo 2 cases

Marriages

J FRANK MCGUIRE, M.D, to Mrs Ella M Churchill, both of Alpena, Mich, April 1

BEVERLY RANDOLPH TUCKER, M.D, to Miss Elsie Boyd of Richmond, Va, April 3

PHILIP DONOHOO, M.D, to Miss Anzelett Lowdermilk, both of Joplin, Mo, March 27

OLEANDER HOWTON M D, to Miss Edith Olivia Johnson, both of Osceola, Ark, April 17

WILLIAM B MCDONALD M.D, Baltimore, to Miss Maude Arnold at Baltimore, April 3

FRANK EARL BELLINGER, M D, Council Bluffs, Iowa, to Miss Edna Hunt, at Lexington, Ky, April 6

CUY RUSSELL JONES, M.D Orlinda Tenn, to Miss Winnie Carter Taylor of Franklin, Ky, March 12

TIMOTHY J FOLEY, M.D Worcester, Mass, to Miss Anna Irene Morris of Roxbury, Boston, recently

OSMER M WILLIS M D to Miss Florence M Gilpin, both of Marietta, Ohio at Parkersburg, W Va, April 2

HERBERT S FAIRALL, M.D, Deer River, Minn, to Miss Edith Callahan of Duluth, at Grand Rapids, Minn, March 22

Deaths

George Rubens Shepherd, M.D Medical Institution of Yale College New Haven, 1866 a member of the American Medical Association medical cadet during the Civil War, since 1880 medical director of the Connecticut Mutual Life Insurance Company sometime president of the Hartford City Medical Society, Hartford County Medical Society and Association of Life Insurance Medical Directors lecturer on life insurance medical examinations at Yale Medical School consulting physician to the Hartford Hospital a member of the board of visitors to the Hartford Retreat for the Insane and a member of the advisory board of the *Yale Medical Journal*, at one time a member of the board of school visitors of Hartford an authority on life insurance statistics and a thorough careful and painstaking medical practitioner who was stricken with cerebral hemorrhage in August last, died March 30, at his home in Hartford from pneumonia aged 64 At Dr Shepherd s funeral the honorary pallbearers were members of the various societies with which he was connected The Hartford Medical Society held a special meeting April 3 to take action on the death of Dr Shepherd

Edward Janney Sidwell Lupton, M.D Johns Hopkins Medical School, Baltimore, 1903, a member of the National Association for the Study and Prevention of Tuberculosis and of the Hendersonville (N C) Medical Association, demonstrator of anatomy in George Washington University and interne at Columbia Hospital, Washington, during 1903 and 1904, assistant in the Adirondack Sanitarium, Trudeau, N Y, from November, 1904, to September, 1906, and thereafter a practitioner at Hendersonville, N C, died at the home of his parents near Martinsville, W Va, from pulmonary tuberculosis, March 23, after an illness of two years, aged 29

Ashbel Parmelee Grinnell, M D Bellevue Hospital Medical College, New York City, 1869, for many years dean of the Medical Department of the University of Vermont, vice president of the New York Medicolegal Society and an expert in medicolegal practice, a member of the state and county medical societies, died in his apartments in New York City, April 6, from septic endocarditis, following a severe attack of epidemic influenza, aged 61

John Henry Wiggins, M.D University of Buffalo (N Y), Medical Department, 1879, a member of the state medical society, for several terms president of the Chautauqua County and of the Jamestown Medical societies, one of the incorporators of the Chautauqua School of Nursing, and one of the foremost practitioners of western New York, died at his home in Jamestown, April 1, from nephritis, after a long illness, aged 52

Luman A. Noyes, M D University of Pennsylvania, Department of Medicine, Philadelphia, 1862, surgeon of Vermont volunteers and of the Nineteenth Pennsylvania Volunteer Cavalry during the Civil War, thereafter a practitioner of Randolph, Vt, until 1880, when he was appointed post surgeon and later agent at Seal Island in the Behring Sea, died at Chicopee, Mass, January 14, from cirrhosis of the liver, aged 66

James S Corn, M D Vanderbilt University, Medical Department, Nashville, Tenn, 1878, a member of the American Medical Association, president of the Howard County (Ark) Medical Society, and one of the most prominent and widely known practitioners of southwestern Arkansas, died suddenly, April 4, in his buggy, from heart disease, five miles from his home in Nashville, aged 56

William J Rush, M.D Howard University, Medical Department, Washington, D C, 1898, one of the founders of the Potomac Hospital, and a member of the Medico-Chirurgical Society, died at his home in Washington, D C, April 4, from pneumonia, after an illness of one week, aged 35

Simon Peter Graham, M.D Harvard University Medical School, Boston, 1903, a member of the American Medical Association and a fellow of the Rhode Island Medical Society, visiting physician to St Joseph's Hospital, Providence, R I, died at his home in that city, Dec 31, 1906, aged 41

John Hotaling, M D Albany (N Y) Medical College, 1863, at one time coroner of Schoharie County and for more than forty years a practitioner of Gallupville, N Y, died at his home in that village, March 30 from cerebral hemorrhage, after an illness of six days aged 69

Mason A. Sheffield, M D Bellevue Hospital Medical College, New York City, 1864 a veteran of the Civil War, and since 1872 a practitioner of St John N B, and a regent of Mount Allison College in that city died suddenly at his home, March 30, from heart disease, aged 70

Robert T Harrison, M D Missouri Medical College, St. Louis 1882 a member of the American Medical Association, and one of the most prominent practitioners of South Central Missouri, died at his home in Dixon, April 4, after an illness of about a year, aged 51

Joseph Augustus Aldrich, M.D Castleton (Vt) Medical College 1847 acting assistant surgeon, U S Army from Oct 1 1863 to May 1864 when he was on duty during the Indian troubles at New Ulm, Minn, died in New York City, January 4 aged 89

John Presley Fletcher, M.D Medical Department of the University of New Orleans, 1875, a member of the state and county medical societies, died at his home in Lonoke Ark, March 9 from capillary bronchitis, after an illness of three weeks aged 80

Charles M Willis M D Rush Medical College Chicago, 1877 a member of the state and county medical societies, and secretary of the local U S Board of Pension Examining Physicians died at his home in Berlin, Wis, April 1, from neurasthenia aged 57

Samuel V Fitzsimmons, M.D University of Nebraska, College of Medicine, Lincoln and Omaha, 1901, of Globe, Ariz, a member of the state and county medical societies, died in Miller Valley, near Prescott, Ariz., January 2, from tuberculosis, aged 33

George W Biggers, M D Beaumont Hospital Medical College, St Louis, 1889, a member of the American Medical Association, and a pioneer practitioner of Eastern Oregon, died at the home of his son in La Grande, Ore., March 21, aged 71

Dicia Houston Baker, M.D Laura Memorial Woman's Medical College, Cincinnati, 1898, a member of the American Medical Association, died at her home in Birmingham, Ala, April 4, after an illness of more than two months, aged 44

J G Hardy, L.R.C S, L.R C.P Edinburgh, 1879, one of the best known physicians of the Moose Mountain (Sask) district and justice of the peace for his district, died at his home in Carlyle, January 14, after an illness of two weeks

Robinson Britton Price, M.D Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons, Kingston, Ont., 1866, a practitioner of Lonsdale, Ont., died in Chicago, January 2, from pneumonia, aged 69

Thomas M Woodson, M D University of Louisville (Ky), Medical Department 1850, a practitioner of Gallatin, Tenn, since 1874, died at his home in that city February 12, after a prolonged illness, from paralysis, aged 76

Herman E McMillen, M.D Western Pennsylvania Medical College, Pittsburg, 1891, a member of the state and county medical societies was found dead in bed at his home in New Castle, Pa, April 6, aged 45

Jahiel C Kilgore, M.D Rush Medical College, Chicago, 1869 a member of the American Medical Association, died at his home in Monmouth, Ill, April 9, from septicemia, due to an autopsy wound.

Walter Forsythe Finnie, M D Cooper Medical College, San Francisco 1885, died recently after a surgical operation, and was buried from the family residence in San Francisco, April 1, aged 49

Thomas E Buck, M.D Dartmouth Medical School, Hanover, N H, 1860, a member of the state and county medical societies, died at his home in St Louis, April 2, from dropsy, aged 71

David W Garver, M.D University of Wooster, Medical Department, Cleveland Ohio, 1869, died at his home in West Salem Ohio, from disease of the liver of long standing, aged 60

Dixon Gough, M D University of Maryland School of Medicine Baltimore, 1844, died at his home in Baltimore, April 8, from heart disease, after an illness of one month

William N Sullivan, M.D Cooper Medical College, San Francisco 1892, formerly a surgeon in the Navy, died January 31, at his home in San Francisco, aged 35

Alfred Russell Starr, M.D College of Physicians and Surgeons in the City of New York 1880, died at his home in New York City, January 11, aged 48

Frederick A Cady, M D Michigan College of Medicine and Surgery, Detroit 1896 of Flint, Mich, died Dec 26, 1906, at Waynesboro, Ga, aged 57

Kossuth Coates, M.D Vanderbilt University, Medical Department, Nashville, Tenn 1880, died at his home in Wilton, Ark Dec 11 1906, aged 54

Augustus M Erwin, M.D Homeopathic Hospital College, Cleveland, 1882, died at his home in Mantau Station, Ohio, February 2 aged 63

Stanley A. DuPaul, M D Detroit (Mich) Medical College, 1883, died at his home in Carleton, Mich, April 7, from lung disease, aged 48

James A. Williams, M D Berkshire Medical College, Pittsfield Mass, 1848, of Algansee, Mich, died Dec 20, 1906, aged 86

Remaldo D Clark, M D Rush Medical College, Chicago 1875, died at his home in Akron, Iowa, Dec 7, 1906, aged 64

William H Fairfax, M.D Medical College of Virginia, Richmond, 1858, died at his home in Hague, Va, April 3, aged 72

J H Cain, M D Eclectic Medical Institute, Cincinnati 1884, died at his home in Redondo, Cal, January 6, aged 60

Elias W Wood, M D Geneva (N Y) Medical College, 1850, died at his home in Oak Park, Ill, April 7

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION Atlantic City June 4 7

Medical and Chir Faculty of Maryland Baltimore April 23 25
Amer Confed Reciprocating Exam. & Lic. Bds. Chicago April 30
American Therapeutic Society Washington May 4-7
Association of American Medical Colleges, Washington May 6
Amer Assn of Genito-Urinary Surgeons Washington May 7 9
Am Assn of Pathologists and Bacteriologists Washington May 7 9
Amer Climatological Association Washington May 7 9
American Gynecological Society Washington, May 7 9
Amer Laryngological Association Washington May 7 9
Amer Medico-Psychological Association Washington May 7 9
American Ophthalmological Society Washington May 7 9
American Orthopedic Society Washington May 7 9
American Pediatric Society Washington May 7 9
American Assn of Physicians Washington May 7 9
American Surgical Association Washington May 7 9
Nebraska State Medical Association Lincoln May 7 9
Texas State Medical Association Mineral Wells May 7
Utah State Medical Association Salt Lake City May 7-8
New Mexico Medical Association Las Cruces May 8 9
Kansas Medical Society Kansas City May 8 10

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy fourth Annual Session, held at Nashville, April 9 11, 1907

The President, DR L A YARBROUGH, in the Chair

Officers Elected

The following officers were elected President, Dr A B Cooke, Nashville, vice presidents, Dr R. E Fort, Nashville, Dr Charles P McNabb, Knoxville, Dr R W Tate, Bolivar, secretary Dr Geo H Price, Nashville, reelected, treasurer, Dr W C Bilbro, Murfreesboro, reelected, delegate to American Medical Association, Dr S W Woodyard, Greenville, alternate, Dr C E Ristine, Knoxville

Knoxville was selected as the place for holding the next annual meeting

Management of Occipito Posterior Presentations

DR G C TRAWICK, Nashville, reported three cases and emphasized the fact that such cases require close attention, and that Nature should be depended on, at first, to accomplish delivery, when she has exhausted her forces, the attendant should complete the delivery

DR T J HAPPEL, Trenton, said the general practitioner has these cases to contend with now and then, he should be able to recognize them, so that proper steps may be taken, if possible, to change the position of the fetus from posterior to anterior If it cannot be done, one should not delay and allow the patient to become exhausted by a protracted labor, hoping Nature will do what she usually often fails to do, but apply forceps promptly

Pseudo Muscular Hypertrophy

DR. J R. RATHMELL Chattanooga, reported a case of this affection which was accompanied by chorea He related two cases which occurred in the same family and two others of which he had knowledge

DR CHARLES P MCNABB, Knoxville, said that in 1898 9, he saw a boy with pseudo muscular hypertrophy A brother of the patient died three or four years previously of the same condition This child developed chorea, then endocarditis, and two years later he succumbed from the effects of mitral insufficiency

General Anesthesia with Chloroform and Ether

DR HERMAN HAWKINS, Jackson confines himself to these anesthetics for three reasons (1) Because the problem of a perfect general anesthetic is still unsolved (2) Universal use requires general knowledge, and efforts should be made to perfect individual skill in administration by reviewing and emphasizing familiar, but important features of the subject (3) For the sake of brevity Personally, he prefers ether, but not to the exclusion entirely of chloroform On the contrary, he urges every physician to be familiar with the administration of both, and to be prepared to say which should be selected in a given case The anesthetist should be guided by this rule, Give

all needed, but not one drop more than is necessary Time each administration and measure the amount of drug used in every case

Needs of a Physician.

DR L, A YARBROUGH said that the medical embryo should have a normal heritage He means by this, pure blood circulating through a sound body, nourishing an evenly balanced nervous system, supported by a firm osseous structure, clothed with well rounded muscles, rendered strong by plenty of exercise either in work or athletics The foundation for his education should be very carefully looked after He should be taught at home, at the common school, at the high school, the college, and at the university, how to think, how to obtain practical knowledge from books, and how to learn something from everybody and everything with which he comes in contact If he would become a great scholar he must needs find in study a pleasure, not a drudgery A taste for study must be cultivated He needs to have a practical education, in addition to what is commonly called good horse sense, for in learning the theoretical, the practical must not be neglected He must have a sound body to possess the strength to sustain those qualities which will enable him to surmount all obstacles encountered in the exercise of that art, which is trying to a man's soul, much less his body, and a sound mind to generate the wisdom whence comes the science and the art

Legislation

DR A. B COOKE, Nashville, related the experience that he and the other members of his committee had in trying to get certain bills through the state legislature The committee, however, notwithstanding the bitter opposition encountered from the drug trade, was successful in getting a pure food law passed, for which the association voted its unanimous thanks

(To be continued)

ST LOUIS MEDICAL SOCIETY

Regular Meeting, held March 23, 1907

The President, DR JOHN C MORFIT, in the Chair

Re-Education in Organic Lesions of the Cord.

DR MARC RAY HUGHES presented two patients to illustrate his reconstruction of an old method of re education of the motor fibers in sclerosis Instead of using the stair or step method advocated by Fraenkel, Dr Hughes urges these patients to use their minds to control the muscles all over The patient is also told to wear rubber heels so as not to become to familiar with the touch of the floor The treatment consists more of exercises than anything else, although tonic treatment is also included These patients simply do what they are told, thus re educating the muscles unconsciously

Injection of Gasserian Ganglion Through Foramen Ovale for Trifacial Neuralgia

DR. V P BLAIR employed the method described by Ostwald in one case of trifacial neuralgia with good result. The patient had had an attack of grip about nine years ago, and following this there appeared a tic, mostly of the maxillary division of the fifth nerve although some of the fibers of the second nerve were also involved The man was never without pain although at times there were remissions in the attacks There was a good deal of shock after the first injection and the patient complained of a tingling sensation over the root of the nerve but the neuralgia was better At the end of a week the pain returned, but after the third attempt at injection when the Gasserian ganglion was reached, there was absolute cessation of the pain and a complete anesthesia There has been no return of the neuralgia since then

DISCUSSION

DR. W M C BRYAN asked whether any untoward effects follow injection of the Gasserian ganglion or of any nerve

DR. LOUIS HAUCK said that in two cases in which he made use of this method of treatment, the first branch of the third nerve was affected, causing bulging of the eye, strabismus, and a slight ptosis All these signs disappeared later Dr Hauck has modified the Ostwald method slightly He passes the needle along the superior maxillary bone until resistance is met In order to reach the third branch the needle is passed along the ramus to the pterygoid process, then along the base of the skull until the needle slips from the bone, entering the foramen ovale He said that even if one should fail to reach it exactly, the injection of the alcohol will not fail to produce the desired results

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CHICAGO MEDICAL SOCIETY

Regular Meeting, held March 20, 1907

The President, DR. GEORGE W WEBSTER, in the Chair

Relation of Tonsillitis to Rheumatism.

DR E FLETCHER INGALS said that he has gradually fallen into error regarding the relation of tonsillitis and rheumatism, and that what has appeared to him merely casual is, in fact, due to an identical cause for the two affections in from 13 to 29 per cent of all cases of acute tonsillitis Forty five per cent of the cases of tonsillitis have a rheumatic history, but 16 per cent of other affections of the throat and chest also have a rheumatic history, so that not more than 29 per cent. of the cases of acute tonsillitis can fairly be attributed to the rheumatic poisons, and more than half of these are very doubtful Among his patients only 19 per cent gave a history of previous attacks of articular rheumatism and 18 per cent. a history of muscular pains that they ascribed to rheumatism Eight per cent of the cases of acute tonsillitis were attended by or immediately followed by articular rheumatism, the same number claimed to have had muscular rheumatism, while in 5 per cent the rheumatic attacks immediately preceded the angina There is not as yet, he said, sufficient evidence to prove that the tonsil is the only or even the chief portal of entrance for the rheumatic poison Considering, however, that, in all probability, acute articular rheumatism represents a mild type of septic hematogenic infection of the joints, there is no reason why the tonsil with its notorious facility for infection with pyogenic germs should not, possibly, even frequently, assume the rôle of an infected wound leading to septic consequences of a systemic nature These septic conditions vary in degree and location, and rheumatism is, perhaps, one of the phenomena The evidence does not justify the belief that inflammation of the tonsil may prevent or take the place of an attack of rheumatism The statement that the acute beginning of muscular rheumatism is nearly always preceded by tonsillitis is not supported by the histories of his cases, as in only 2 per cent did muscular rheumatism follow tonsillitis However, in 6 per cent muscular pains that were called rheumatism attended the tonsillitis, though these may have been due to the fever attending the inflammation of the tonsils

DISCUSSION

DR J A CAPPS referred to the type of cases with acute cervical adenitis that occurs especially in children with a simple sore throat This combination of sore throat and adenitis is important for two reasons First, the combination has in the last year been more prevalent than usual and, second, an interesting feature is the etiology of these infections The clinical picture is this A child has a sore throat, with high temperature and a correspondingly rapid pulse On examination the throat is not ulcerated, nor is there any follicular tonsillitis but simply a red congested throat The soft palate tonsils pharynx and nasopharynx take part in this redness equally The temperature remains high for several days The infection is more severe than one expects from the first examination then gradually the temperature subsides Perhaps there has been a slight glandular swelling but not pronounced, when the symptoms exacerbate The temperature rises usually to 104 5°, the pulse is rapid again the child seems quite as ill or more so than at the first visit and there is noticeable a decided swelling of the cervical glands particularly near the

angle of the jaw, involving the deep cervical glands The enlargement of the glands, at first discrete, is very apt to become diffuse, and is very rapid in its progress, until the lump becomes the size of a hen's egg or the size of a fist Usually it is quite hard and tender, irregular in outline, so that the individual glands can not be made out definitely This tumor mass may remain without much change, the elevation of temperature continuing for a week or two, possibly longer, when it either begins to subside or else the case goes on to suppuration A red spot appears at some point, and either suppurates spontaneously or is opened, a small quantity of pus being evacuated Usually the whole group of glands does not suppurate but only a portion of them He has seen five such cases which would come within this group Cultures were taken from the throat in four, and in all four influenza bacilli were found in considerable number There were present also streptococci or staphylococci Two of the cases went on to suppuration and the pus from both showed streptococci in large numbers

Dr. D N Eisendrath said that cases of acute enlargement of the lymph nodes of the neck probably correspond to some extent with those described by Pfeiffer in 1899 as glandular fever In the cases which he saw the enlargement of the lymph nodes was out of proportion to the height of the temperature A child for instance would have a temperature of 104 5°, with a relatively small number of lymph nodes enlarged not larger, perhaps, than the average-sized marble During the present winter these cases have assumed a different type in that not only have they affected the lymph nodes of the neck following primary sore throat but they have affected other lymph nodes, as those of the axilla the groin, apparently taking part in the process of a general infection so that in some cases it was thought there was an acute lymphatic leukemia until the blood was examined He said there have been reported 11 undoubted cases of primary tuberculosis of the tonsil, the majority of them having been verified by autopsies and by finding primary tuberculosis of the tonsil in which there were no other tubercle bacilli found in the body the primary focus being in the tonsil, with secondary involvement of the lymph nodes of the neck A surgeon in operating for tubercular glands of the neck should also remove the tonsils and adenoids As to the relation between appendicitis and tonsillitis, scarcely a winter has passed during the last two or three years without surgeons having seen tonsillitis in children followed by typical attacks of appendicitis so that clinically the association of the two diseases is quite well established

Dr R H Babcock said that in a very large percentage of cases the portal of entrance of the infection is the tonsil A large percentage of the cases he sees are instances with some form of heart disease and nearly all which he has investigated have shown either diseased tonsils or a history of previous sore throat He believes the trend of investigation is to the effect that we must abandon the old notion that acute articular rheumatism is a blood disease in the sense of its being due to some chemical irritant in fact, it is a specific disease and there have been a great many observations made which go far to prove that the micro organism responsible for attacks of acute articular rheumatism of the classical type is a diplococcus allied to the streptococcus, and which has been called the diplococcus rheumaticus

With reference to the importance played by follicular tonsillitis in the production of acute endocarditis he cited the instance of a young man in Chicago who developed an acute tonsillitis which subsided apparently in a few days The patient however did not fully regain his health and later developed symptoms which at first were thought to be those of typhoid fever The disease proved to be a streptococcus infection with malignant endocarditis pure streptococci having been obtained from the blood The patient died six months later The autopsy substantiated the diagnosis which had been made during life In this case it was clear that infection started in the tonsil that it was apparently a trifling tonsillitis, and yet it resulted in the man's death six months later

Dr Frank S Churchill said that a child with enlarged and diseased tonsils is constantly exposed to repeated infections, such as those produced by the streptococcus and influenza bacillus, also the more serious infections, such as those produced by the Klebs Loeffler bacillus and scarlatina He always advises removal of adenoids and enlarged tonsils, if possible, in the late spring or summer, on account of the climatic conditions, for he has repeatedly seen children from whom adenoids and tonsils have been removed have persistent colds throughout the winter The pediatrician does not see an arthritis in the most common and frequent manifestation of rheumatism He sees, rather, endocarditis Other manifestations of rheumatism are subcutaneous enlargements erythema, pleurisy, appendicitis and chorea Amberg, of Baltimore, who tested the opsonic index of breast fed and bottle-fed babies found that as a rule the index of breast fed babies runs higher than does the index of bottle fed babies showing the greater resistance on the part of such babies to infectious diseases

Dr W L Ballenger said that the trend of opinion is that the tonsils are a source of infection not only of tuberculosis but of rheumatism and many other conditions He has removed many hundreds of tonsils with the capsule intact, and has yet to find many cases in which the crypts did not extend very near to the capsule In order to remove the atrium of infection in these cases, the tonsils should be removed to the depth of the crypts, and the easiest and most certain way to do that is to remove the tonsil with its capsule

Dr. C M Robertson said there have been more than 11 cases of primary tuberculosis of the tonsil reported up to the present time, but there were only 11 cases found postmortem, because by primary tuberculosis is meant that we are unable to find tuberculosis in other parts of the body than the tonsil as determined by the microscope He agrees with Dr Eisendrath that when removing tubercular glands of the neck it is necessary to remove also the tonsils, as the relationship between the two is now established

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Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every-day practice Contributions will be welcomed from our readers]

Ointments

(*Concluded from page 129*)

PHARMACOPEIAL PREPARATIONS

Many good ointments are given in the United States Pharmacopeia, which we can prescribe if we are in doubt as to the proper amounts of the various ingredients used The following are in the present Pharmacopeia

Unguentum	*Unguentum*
Acidi Borici,	Hydrargyri Oxidi Rubri,
Acidi Tannici,	Iodi,
Aquæ Rosæ,	Iodoformi
Belladonnæ	Phenolis
Chrysarobini,	Picis Liquidæ,
Diachylon,	Potassii Iodidi,
Callæ,	Stramonii,
Hydrargyri	Sulphuris,
Hydrargyri Ammoniati,	Veratrinæ,
Hydrargyri Dilutum,	Zinci Oxidi
Hydrargyri Nitratis	Zinci Stearatis
Hydrargyri Oxidi Flavi,	

It might be well at this point to call attention to the fact that all medicines are limited in their action in any pathologic condition, and that the claims made for many of the proprietary ointments are ridiculous Pharmaceutically they may be elegant, but therapeutically they are not superior to the above list, which nearly covers the ground of treatment as applied by ointments

CERATES

It is often desirable to have a firmer base to carry our active principles, especially when a local protective action is also desired This is accomplished by adding more wax as illustrated by the U S P Ceratum

Ceræ albæ	℥i	30
Petrolati albi	ʒv	20
Adipis benzoinati	ʒxiiss	50

Notice that this mixture contains 30 per cent of wax, while the Unguentum contains 20 per cent. Cerates are generally used for local effect alone, as illustrated in the list given in the U. S. P.

Ceratum	*Ceratum*
Camphoræ,	Resinæ,
Cantharidis,	Resinæ Compositum
Plumbi Subacetatis,	

A convenient use of the terms unguentum and ceratum is in the direction to the druggist, when prescribing a salve, to designate the firmness desired.

OTHER MEDIA.

In addition to the mineral, vegetable, and animal fats described, there are other media which fulfill the same indications.

Oleates.—As stated above, olein is a glycerid of oleic acid. If the oleic acid be combined with other substances we have a class called oleates which can be applied alone to the surface of the body or in combination with other fats. The list of oleates on the market is large, but only the following are found in the U. S. P.

Oleatum

Atropinæ	2 per cent. of Atropin
Cocainæ	5 per cent. of Cocain
Hydrargyri	25 per cent. of Mercury
Quininæ	25 per cent. of Quinin
Veratrinæ	2 per cent. of Veratrin

The reputed advantage of this class is the rapidity of absorption.

Lanolin.—Another class is the fat derived from the wool of sheep, which, closely resembling the secretions of the sebaceous glands of man, is readily absorbed. It was put on the market as Lanolin and given in the U. S. P. as Adeps Lanæ without water, and Adeps Lanæ Hydrosus, with about 30 per cent. water. Its chemical nature is entirely different from the other fats, it does not decompose and so can carry substances which the others can not, it absorbs an equal quantity of water (adeps lanæ hydrosus) does not contain more than 30 per cent., enabling it to carry many salts in solution.

Cacao Butter.—Cacao butter (Oleum Theobromatis) has a field of its own in being used as a vehicle to carry active substances in the form of suppositories to the orifices of the body. It is used also for cosmetic purposes, but seldom in the form of ointments for medicinal purposes.

Glycerin.—Glycerin is used in many combinations which are superior to fats for certain cases, mainly in local conditions where fats are not desirable, as follows. Glycerite of starch (Glyceritum Amyli) makes a pleasing base for many purposes. It can be perfumed and made into a very elegant pharmaceutical mixture, as shown by the proprietary articles on the market. The popular clay poultices are mixtures of clay and glycerin with aromatics. The formula is given in the U. S. P. under the title Cataplasma Kaolini.

Another combination of glycerin is Gelatinum Glycerinatum, which is intended to be used as a base for making suppositories, but may be used also for ointments.

Soaps.—Soaps are often used as a medium for applying medicinal substances to the skin, but they are generally overrated, the beneficial effect being due to the cleansing action of the soap. A moment's consideration will show that a 5 per cent. phenol soap will yield a very dilute solution if any amount of water is used.

Terpenes.—The essential oils are entirely different from the other oils, being formed by the mixture of certain bases called terpenes. Only fifteen terpenes are known, while the list of essential oils is very large, the oxidation of these terpenes produces such compounds as camphor, menthol, eucalyptol, thymol, etc. These oils and derivatives are mainly used to perfume pharmaceutical mixtures. A very small quantity is sufficient to change an obnoxious smelling mixture into a very attractive one. The main essential oils may also be used as irritants, antiseptics and anesthetics. The exudations found on trees are usually mixtures of terpenes and a soluble gum. For example, the exudation of the pine tree yields a solid substance called rosin (Resina) and a liquid turpentine (Oleum Terebinthinæ). The oil is rectified for internal administration and called Oleum Terebinthinæ Rectificatum. The term spirit of turpentine should not be used, as now we use the term spirit, to designate an alcoholic solution of a volatile substance, but we should use the proper name oil of turpentine. Rosin is used on account of its high melting point to harden ointments and cerates. It is present in Ceratum Resinæ, Ceratum Resinæ Compositum and Ceratum Cantharidis. These exudations are the source of many of the balsams which formerly had such a high standing in the treating of all ailments, but now are simply used for the effect that the name produces.

SUMMARY.

Ointments are semi solid preparations used for the application of medicinal substances to the surface of the body.

For local effect the mineral fats and the glycerin mixtures should be used as a base.

For systemic effect the vegetable and animal fats should be used. Pharmaceutical skill should be used to make them attractive to the sense of smell by the addition of some perfume and attractive to the eye by the use of some attractive coloring matter and the use of the collapsible tube.

Bronchitis.

If the patient is seen early, while the coryza is still present, the attack may often be aborted by administration of Dover's powder at bedtime, in combination with quinin, as follows:

℞	Pulveris ipecacuanhæ et opii	gr. x	65
	Quininæ sulphatis	gr. v	32

Ft. pulvis. Sig.: One such powder at bedtime.

The patient may also be given a hot bath or a mustard foot bath, and a glass of hot lemonade, with or without whisky. A saline laxative should be given the next morning. In the case of children a mild calomel purge may be given, followed by castor oil.

The patient should be kept in a warm, moist atmosphere, preferably indoors, and small doses of quinin should be given for a day or two.

Anders states that if this treatment fails, or if the patient does not come under observation early enough, the main objects of treatment should be: (a) To render the secretions free, (b) to hasten the expulsion of the sputum after it has been loosened. For this he recommends the following formulas:

℞	Potassii citratis	ʒvi	24
	Liquoris ammonii acetatis	f℥v	145
	Spiritus ætheris nitrosi	f℥i	30
	Vini ipecacuanhæ	fʒii	8
	Syrupi pruni virginianæ q. s. ad	f℥viii	240

M. Sig.: One tablespoonful in water every two hours until the secretions are loosened.

If the temperature is maintained at 102 or 103 F., or over, tincture of aconite min. xxx (2.0) may be added to the above mixture. If a distressing cough with much tickling of the throat be present codein gr. ii iii (0.12-0.19) may be added.

When the above prescription is not productive of free secretion and troublesome cough continues, Anders employs the following combination:

℞	Ammonii chloridi	ʒv	20
	Codeinæ	gr. iv-vi	25-4
	Spiritus juniperi comp.	f℥ss	15
	Misturæ glycyrrhizæ comp.	f℥iiss	75
	Syrupi pruni virginianæ q. s. ad	f℥iv	120

M. Sig.: One teaspoonful every two hours.

Potter, "Materia Medica, Pharmacy and Therapeutics," recommends the following formulas in acute bronchitis:

℞	Antimonii et potassii tartratis	gr. ii	13
	Liquoris ammonii acetatis	f℥iv	120
	Spiritus ætheris nitrosi	f℥i	30
	Tincturæ aconiti	fʒss	15
	Syrupi q. s. ad	f℥vi	180

M. Sig.: One teaspoonful every two or three hours during the first stage.

℞	Fluidextracti cimicifugæ	f℥ss	15
	Tincturæ opii deodorati	f℥i	4
	Syrupi tolutani q. s. ad	f℥ii	60

M. Sig.: A teaspoonful every four hours.

℞ Tincturæ sanguinariæ			
Tincturæ lobeliæ, āā	f℥i	4	
Vini ipecacuanhæ	f℥ii	8	
Syrupi tolutani q s ad	f℥iv	120	

M Sig A teaspoonful every three hours

For bronchitis in children Koplik recommends the following simple and practical combination

℞ Tincturæ opii camphoratæ	ʒi	4	
Syrupi ipecacuanhæ	m xxx	2	
Syrupi tolutani	f℥ii	60	

M Sig One teaspoonful every three hours

In capillary bronchitis in children Potter recommends the following formulas

℞ Ammonii iodidi	ʒi ii	4 8	
Ammonii carbonatis	ʒii iii	8 12	
Syrupi glycyrrhizæ			
Syrupi tolutani, āā	f℥ii	60	

M Sig A teaspoonful every two or three hours

℞ Quininæ sulphatis	gr vi		4
Acidi sulphurici dil	m xii		7
Syrupi	f℥ss	15	
Aquæ	f℥iiss	75	

M Sig A teaspoonful every two hours to a child of 2 or 3 years, older children require more quinin

℞ Liquoris ammonii acetatis	f℥ss	15	
Syrupi ipecacuanhæ	f℥i	4	
Morphinæ sulphatis	gr 1/12		005
Syrupi acaciæ	f℥i	30	
Aquæ	f℥iss	45	

M Sig A teaspoonful every two hours for a child 2 years old, when the face is pale, expression languid and skin cool

It must be remembered that expectorants should never be given to infants, as they are unable to cough and may drown in their own secretions, emetics should be prescribed instead Emetics are necessary when suffocative symptoms become prominent

Burns and Scalds.

In the *Virginia Medical Semi Monthly* M. Moran recommends the following for the treatment of burns and scalds

Phenol (acidi carbolici)	1 per cent
Balsami peruviani	5 per cent
Olei ricini	94 per cent

Gauze or cotton is saturated with the mixture and applied to the injured part The dressing should be renewed daily

Alcohol in Affections of Ear, Nose and Throat.

W L Ballenger, Chicago, states that alcohol is a valuable remedy for topical applications, and is especially useful in a gargle It is astringent and antiseptic, and when properly diluted is cooling to an inflamed surface He recommends the following combination

℞ Alcoholis			
Aquæ cinnamomi āā	f℥ii	60	
Liquoris formaldehydi	m ii		12
Glycerini	f℥v	20	
Aquæ dest. q s ad	f℥viii	240	

M Sig Use as a gargle

This formula, Ballenger states, makes a good gargle in acute tonsillar and pharyngeal inflammations and in the soreness following removal of the tonsils In very young children it may be used in a more diluted form

In chronic otorrhea this author recommends alcohol in the following dilutions and mixtures

1 Alcohol 1 part, distilled water 2 parts
2 Alcohol 1 part, distilled water 1 part
3 Alcohol 2 parts, distilled water 1 part
4 Alcohol 3 parts, distilled water 1 part
5 Alcohol 95 per cent

These dilutions are used principally in the treatment of chronic suppurative otitis media The meatus is first filled with the weakest solution, then mopped out, and each solution is applied in series until the patient tolerates the 95 per cent solution If the strongest solution is applied at once it causes considerable pain and irritation, whereas, if the strength is gradually increased these unpleasant results are avoided

Medicolegal

Sale of Medicines by Unlicensed Employés.

The Appellate Term of the Supreme Court of New York holds, in the case of State Board of Pharmacy vs Matthews, that tincture of arnica, tincture of iodin and spirits of camphor are medicines, within the meaning of a law relative to the sale of medicines That they were not compounded at the counter, but were labeled, sealed and placed on the counter for immediate sale, it does not consider made any difference It says that the suggestion that the statute, restricting sales of medicines by unlicensed employés, when literally construed, becomes unreasonable and unconstitutional, fails to recognize the ample power of the legislature to enact police regulations for the health and public welfare of the community, which can be threatened in no more perilous way than by the sale of medicines by inexperienced persons

Pharmacopeia Purity Required in Sales by Grocers

The Appellate Term of the Supreme Court of New York says that the defendant in the case of State Board of Pharmacy vs Gasau, a grocer, sold in the course of trade a certain quantity of cream of tartar, which, instead of being 99 per cent. pure, according to the standard of the Pharmacopeia, contained 74 7 per cent of cream of tartar and the rest in alum Subdivision 2 of Section 197 of Article 11 of the Public Health Law of New York provides that "every proprietor of a wholesale and retail drug store, pharmacy, or other place where drugs, medicines or chemicals are sold, shall be held responsible for the quality and strength" of these commodities, with certain specified exceptions Section 199 of said article provides that this article shall not apply to the sale by merchants of ammonia, bicarbonate of soda, borax, camphor, castor oil, cream of tartar, "except as herein provided" But the court thinks that the intention of the legislature at the time it enacted the exception contained in Section 199 was obviously merely to except merchants who deal in cream of tartar and certain other persons from the provisions of the article regarding the visitorial duties of the State Board of Pharmacy and the granting of licenses in pharmacy, and not to except them from the general prohibition against adulteration which had not yet been enacted When this general prohibitory clause was subsequently enacted, it contained no exception which could shelter the defendant and its unrestricted application was permitted by the express language of Section 199, which was at the same time amended by inserting a qualifying clause that it should operate "except as herein provided" Since the defendant failed to bring himself within Section 199, it followed that he had rendered himself liable for violation of the public health law as a "proprietor of a retail place where chemicals are sold" and consequently the judgment against him must be affirmed

Pay Recoverable for Caring for Smallpox Patients

The Supreme Court of Arkansas says, on the appeal of Marion County vs Bonds and another, where the latter parties sought to recover for waiting on and nursing certain smallpox patients, that the Arkansas statute provides that it shall be lawful for the county to allow accounts incurred by any person in preventing the spread and in nursing and caring for persons in their respective counties who have been afflicted with smallpox It also provides that "no persons shall be allowed a greater sum for services rendered under the provisions of this act than is customary for such services in other cases" The purpose of the law was to enable county courts to aid in the suppression of smallpox, but at the same time they are prevented by the last clause quoted from making exorbitant allowances for services rendered during the dread and stress of such contagions They can not allow greater amounts than customary charges for "such services in other cases," i e, other cases than smallpox The trial court correctly declared the law in declaring as follows "That the plaintiffs were entitled to the value of their services according to the market value for such labor in other fever cases—that is, according to

the wages paid for labor generally in like services—and declares that $5 a day was reasonable wages for the plaintiffs, and declares that they were entitled, under the evidence, to this sum" The plaintiffs made out their cases by proof that the charges made were reasonable for the service they rendered The proof that they worked night and day, not only nursing the stricken ones, but doing the household work besides, was sufficient to sustain the trial court's finding The criterion for determining the proper amount is the value of such services, i e, the service of nursing the sick, doing household duties, etc, made necessary on account of the disease, if such service or similar service were performed in other cases than smallpox The law makers intended that no unusual and extravagant charge should be allowed on account of the exigencies produced by the dreadful disease But, in the present cases, even if the amount allowed for nursing, under the proof, would have been unreasonable, the fact that the plaintiffs performed, in addition, customary household duties, made necessary by reason of the contagion, amply sustained the trial court's finding

Statements Made to Alienist.

The Court of Appeals of New York says that in the homicide case of People vs Furlong, counsel for the defendant claimed that the homicide was committed while the defendant was under the influence of epileptic furor A physician of great experience in mental diseases testified that he was informed by some one that the court desired him to make an examination of the defendant, and that the latter was brought to the room where the examination was held, and that he made the examination and questioned the defendant to ascertain the truth in regard to his claim of insanity The examination was made during one of the adjournments of the court, while the defendant was on trial It was made without the knowledge or presence of either counsel Whether due courtesy was shown to the counsel engaged in the trial in holding the examination without notifying them, the court says was a question it was not to pass on The physician testified that before examining the defendant he had said to him that he thought it was for his interest to answer questions unreservedly and truthfully that he might decline to answer any question that he might put to him, and that, while he was examining him in the interests of the court and not as either for or against him, anything he said in answer to his questions might be used against him

The court holds that the statement which was made to the physician was not within the constitutional prohibition against compelling a defendant to give testimony against himself The statement made by the defendant was properly received in evidence as an admission or for the purpose of showing that the defendant's statements made at different times were contradictory and inconsistent. The evidence was not incompetent because of the fact that the witness was a physician The authorities cited by the defendant to show that unsworn statements by the defendant as to transactions prior to the time of the trial can not be given in evidence for use on which to base an expert opinion as to the sanity of the defendant at the time of the commission of the crime all relate to testimony in behalf of the defendant Such testimony if allowed would permit a defendant to prepare his statement to fit his particular case The reason for excluding testimony so offered in behalf of the defendant does not apply where it is sought to show conversations and statements of a defendant for use on a trial in behalf of the people

Prescribing Remedies—Use of Hypnotism or Massage

The Court of General Sessions of Delaware says, in the case of State vs Lawson through Chief Justice Lore charging jury, that the defendant was charged with practicing medicine without a license Under the statutes of this state it is a misdemeanor for any person to engage in practicing the profession of medicine within the limits of the state without first having obtained a license therefor The persons classed by the statute as physicians are designated as follows 'Every person (except apothecaries) whose business it is for fee and reward to prescribe remedies or perform surgical operations for the cure of any bodily disease or ailing, shall be deemed a physician or dentist as the case may be, within the meaning of this act." Revised Code of 1852, amended in 1893, page 58, chapter 7

The defendant did not contend that he had a license to practice medicine, but relied on the defense that he treated his patients personally by hypnotism and massage, without prescribing any remedies, and that such treatment is not in violation of the statute. The jury's inquiry, then was Did the defendant, for fee or reward, prescribe remedies or perform surgical operations for the cure of any bodily disease or ailing?

It is the duty of the court to instruct the jury as to the meaning of the word "prescribe" remedies, used in the statute In medicine, to "prescribe" remedies is defined to be "to write or give medical directions, to indicate remedies" It is not necessary that such prescription should be in writing It may be given or indicated verbally Any direction given to the patient for drugs, medicines, or other remedies, for the cure of bodily diseases, directing how they are to be applied to or used by the patient, is a prescription within the meaning of the statute It would make no difference whether the direction was given by the person in charge of the patient himself or by another person, even though he be a licensed physician engaged by and under the control and direction of the defendant in that particular State vs Paul, 56 Neb 369, Benham vs State, 116 Ind 112, *In re* Bruendlis' Will, 102 Wis 45, O'Neil vs State (Tenn) S W 627

Personal treatment of one person by another by hypnotism or massage alone, unaccompanied by any direction as to the use of drugs, medicines, or other remedies to be used by the patient, would not come within the term "prescribing remedies" used in the statute When accompanied, however, by such direction as to the use of drugs, medicines, or other remedies by the patient, it would come within the terms of the statute and be in violation thereof Should the jury, therefore, be satisfied, from the evidence, beyond a reasonable doubt, that the defendant did, for fee and reward, either by himself or by another under his direction, engage in the business of prescribing remedies for curing bodily diseases or ailing, the verdict should be guilty If not so satisfied, it should be not guilty

Proper Evidence in "Traumatic Appendicitis" Case

The Supreme Court of Alabama says, on the appeal of Birmingham Railway, Light & Power Company vs Moore, a personal injury case brought by the latter party, that the plaintiff contended that in a collision of cars, she received a blow on the lower part of the right side of the abdomen which superinduced "traumatic appendicitis" The evidence without conflict showed that she was a healthy woman up to the time of the collision, had never detected or felt any symptoms of appendicitis up to that time, nor had she received any injury before that time It further showed that she had pain in the region of the appendix from the time she received the blow in her side, on the 11th of June, up to the 22d day of July, at which time she was operated on in a hospital, the operation demonstrating that she had appendicitis The experts differed in their opinion as to whether the appendicitis, with which she was affected, was the proximate result of the blow—whether it was "traumatic appendicitis" This made a question for the determination of the jury, which rendered a verdict for the plaintiff

It being necessary for the plaintiff to offer evidence to show that she incurred liability for medical bills, it was proper to ask her to state what was the amount she paid or was to pay the physicians she testified had rendered her medical services If it was conceded that only reasonable bills for physicians services were recoverable this did not render the evidence sought objectionable, and, if no evidence was offered to show reasonableness of such services the defendant should have moved the court to exclude the evidence, or should have asked a charge excluding such services as an element of damages

It was proper to show that all and any means known to medical skill were resorted to in the proper treatment of the plaintiff, to relieve her without subjecting her to the danger of an operation The court can not say that remedies which

would allay irritation would not postpone the necessity for operating for appendicitis

Notwithstanding that the operation performed on the plaintiff was a successful one, it was competent to show the results that followed the operation, and as one of the results that the plaintiff would necessarily have to be careful with respect to her person, and the length of time such care would have to be observed

Objection was made to the introduction in evidence of a part of a work on "Practice on Surgery," and of another on "Modern Surgery" Each of the books was shown to be a standard medical work. The parts offered in evidence pertained to the pathology of appendicitis, particularly relating to the disputed question of whether or not appendicitis could be caused by a blow or bruise—by traumatism Under the rule established by this court in 1857 in the case of Stoudenmeier vs Williamson, 29 Ala 558, the objections to the introduction of the books were properly overruled

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

New York Medical Journal

April 6

1 *Eructations in Heart Patients F Schwyzer New York
2 Physical Processes of Immunity and Infection J Wright New York.
3 *Spondylosis Rhizomelia. A. Gordon Philadelphia.
4 Facilities for Treating Venereal Patients in the Dispensaries and Hospitals of New York. A. D Mewborn New York
5 What Can Treatment Do for the Prophylaxis of Venereal Disease? H G Klotz New York.
6 How Can Prophylaxis by Treatment in Cases of Venereal Disease Best Be Obtained? J Pedersen New York
7 *Present Status of Preliminary Iridectomy as Related to Cataract Extraction W Reber Philadelphia.
8 *Unpublished Observations on Endemic Neuritis J M. Wheate Boise Idaho

1 **Eructations in Heart Patients**—Schwyzer believes that it is chiefly patients with abdominal arteriosclerosis who are troubled with large amounts of gas He calls the gastric syndrome in abdominal arteriosclerosis an intermittent claudication of the stomach, the only difference being that it does not show its circulatory insufficiency primarily by the feeling of pain but by a sensation of pressure and by intense and partly futile contractions causing eructations which are followed by total relaxation

3 **Spondylosis Rhizomelia.**—Gordon reports two cases of this kind In the first case there was rigidity of the lower part of the spine and a kyphosis at the same level Symptoms of involvement of the spinal cord and of the roots were very evident A rheumatic personal or family history was absent In the second case there were a very marked rigidity of the lower spine and an ankylosis of the large proximal joints of the lower limbs Pain was present in both extremities and in the back Cord involvement was evident There was no rheumatic history The reflexes in this case were exaggerated, while in the first case they were entirely abolished

7 —See abstract in THE JOURNAL, Oct 6, 1906, page 1130

8 **Endemic Neuritis**—According to Wheate, beriberi is an acute infectious disease transmitted by direct infection, probably always through a skin abrasion on some vulnerable portion of the body The specific organism causing the disease is an exceedingly small bacillus usually seen in pairs, but not encapsulated which is found in the cerebrospinal fluid and blood only during the acute or inflammatory stage of the disease, after which time it rapidly disappears from these tissues The favorite habitat is virgin soil protected from sunlight. It is a slightly facultative anaërobe, and not very viable being speedily killed by exposure to sunlight as demonstrated by bacteriologic test and by clinical experience The former classification of the disease as beriberi hydrops and beriberi atrophica is erroneous There is but one form of beriberi which is characterized by three stages 1 The stage of invasion 2 The stage of exudation beginning in the cord and following by toxic motor and sensory paralysis of varying extent, which in typical cases proceeds to 3 the stage of compensation, in which the disappearance of the bacilli and the toxic stage results in the rapid (usually) disappearance of the dropsy in cases in which softening and dilatation have not progressed to the degree of permanent loss of compensatory action The degenerative cord and nerve lesion is long present in all moderately severe cases, resembling the lesion in tabes in this particular, and even though the heart lesion appears to have subsided while the patient is leading the inactive life of a convalescent, the damage to function is permanent. This explains the numerous cases of sudden and unaccountable death in patients leaving hospitals apparently cured, as reported by many observers with extensive hospital experience

Medical Record, New York.

April 6

9 *Gastroscopy C Jackson Pittsburg Pa
10 *Harmful Involution of the Appendix. R T Morris New York
11 *Cause and Cure of Cancer A C Jacobson New York.
12 *Diagnostic and Prognostic Value of Eosinophiles in Circulating Blood. L Blumgart New York
13 *Four Cases of Syphilis Unassociated with Observable Secondary Manifestations G M MacKee New York
14 *Early Separation of Jointed Twins (Xiphopagus) C F Kieffer Fort D A Russell Wyo

9 —Practically the same paper was published in *Annals of Otology, Rhinology and Laryngology* for December 1906

10 **Harmful Involution of the Appendix.**—Morris draws attention to the fact that the normal involution of the appendix, with replacement of the lymphoid, mucous and submucous coats by connective tissue, may produce unpleasant symptoms for a long period and thus become harmful to the patient The process is distinctly irritative, not infective Involution seems to guard the patient against infection Normal involution of the appendix may begin early in life, but most patients who show its symptoms are over 25 years of age Symptoms begin gradually, there is autointoxication with its train of symptoms, and there are intestinal dyspepsia, sensation of discomfort in the region of the appendix, an appendix that feels hard and narrow on palpation and hyperesthesia of the lumbar plexus of the nerves There is persistent distension of the cecum and colon with gas Irritation of the nerve filaments is communicated to the intimate ganglia of the bowel walls and causes disturbance at the nearest point of the bowel The sensation of discomfort in the appendiceal region is not due to distension with gas, but to the direct irritation of nerve filaments

11 **Cause and Cure of Cancer**—Jacobson advances a new theory as to the cause of cancer He says that parasites may be concerned in the causation of cancer by means of local irritation that they produce but only thus The carcinomatous growth, he asserts is a perverted growth, or perverted physiologic growth At the degenerative period of life, when atrophy of the sexual organs occurs physiologic energy that is produced in the body finds itself at a loss for an outlet This energy goes to produce cancerous overgrowths Peoples with less energy, like the inhabitants of Burmah, Persia and the East, are less apt to have cancer Coley's results with toxins may depend on the engagement and diversion of this energy For the etiology of benign growths the author postulates Cohnheim's theory trauma, or parasites producing the irritation For the etiology of malignant growths a further source is needed—perverted energy Spontaneous disappearance of cancer would be due to readjustment of the energy of economy Young healthy individuals can not be inoculated because the fundamental factor, perverted energy is wanting This accounts for the metamorphoses of benign into malignant growths Radical extirpation of cancer is not enough because the perverted energy still exists causing recurrence When cancer occurs in the young it is due to sexual anomalies with maladjustment of energy

12 **Eosinophiles**—According to Blumgart the entire disappearance or very marked diminution of the eosinophiles together with a distinct leucopenia goes far to establish the diagnosis of typhoid in doubtful cases A normal or increased percentage of eosinophiles speaks against typhoid In cases of undoubted typhoid the presence of eosinophiles even in small numbers, during the first week is a favo[illegible] al for a probable mild type Blumgart [illegible]

patient should be considered cured or dismissed from observation before he has regained permanently at least a normal percentage of the eosinophiles

13 **Syphilis.**—Mackee advises the exercise of extreme care in making a diagnosis of syphilis in cases unassociated with secondary manifestations before advising the recognized course of constitutional treatment He says that a careful search for the *Spirochæta pallida* should be made in the primary and secondary lesions of every case, for if this is found it will confirm the diagnosis

14 **Separation of Jointed Twins**—Kieffer relates the history of an African, 60 years old, born on board a slave ship, as one of jointed twins The mother died after a Cesarean section done by the ship surgeon The surgeon also separated the twins, of whom, the other died In the scar over the sternum, at the point of separation, began a keloid, which at the age of eight years, had to be removed, and returned, but not to become thick Later, other keloids formed, of which one of large size is especially mentioned as appearing over the right temple and parietal region, it has been removed, but has returned, and now shows signs of malignant degeneration

Boston Medical and Surgical Journal.

April 4

15 *Campaign Against Uncinariasis in Porto Rico B K Ashford, U S A and W W King U S P H and M H S
16 *Effect of Industry on Health W C Hanson Cambridge
17 Treatment of Chronic Urethral Discharge. B Tenney Boston
18 *Crusade Against Tuberculosis in Germany (Continued) E A Locke Boston
19 *Unusual Pupillary Phenomena in Hysteria. J J Putnam Boston
20 *Hysterical Trunk Deformity Scoliosis M Bohm Boston
21 *Feigned Eruption in an Hysterical Man Charles J White Boston

15—See abstract in THE JOURNAL, March 23, 1907, page 1057

16 **Effect of Industry on Health.**—Hanson describes the attempt made recently by the State Board of Health of Massachusetts to establish factory inspection work on a scientific basis

18 **Crusade Against Tuberculosis in Germany**—This is the second installment of Locke's paper on this subject In it he discusses the care of the sick as well as the prophylactic measures employed, such as the convalescent camps, farm colonies, sanatoria, the special institutions for the far advanced cases, the dwelling house reform, the crusade against tuberculosis in children, and tuberculosis in the army and navy

19 **Pupillary Phenomena in Hysteria**—In the case reported by Putnam, there was dilatation, with complete immobility of the pupil of one eye, associated with spasm of the ciliary muscle of the other eye the pupil of which was rather small habitually, but responded to light and with convergence

20 **Hysterical Trunk Deformity**—Bohm reports a case of lateral curvature of the spine which resisted all attempts at correction, but disappeared under extension or even in recumbency There was no rotation present Bohm is convinced that this is a case of hysterical scoliosis

21 **Feigned Eruption**—Following a burn of the right middle finger, White's patient developed a peculiar eruption which involved the back of the right hand and half of the extensor surface of the forearm There first appeared small red spots which became covered with brown crusts and developed slowly in size until they became as large as a five cent piece Some of the lesions were two inches in diameter The patient was well physically, but was extremely nervous There were also some lesions on the dorsum of the right foot Over the whole right half of the body the man was anesthetic, even the bulbar conjunctiva and nostril being insensitive to severe irritation

St Louis Medical Review

March 30

22 Examination of the Heart W H Broadbent London Eng
23 Some Phases of the Pathology of Cardiovascular System G McConnell St. Louis

Lancet-Clinic, Cincinnati

April 6

24 Semi Centennial Anniversary of the Academy of Medicine of Cincinnati N P Dandridge B P Goode C D Palmer and S Nickles Cincinnati.
25 Diphtheritic and Other Forms of Croup with Special Reference to Intubation W A Wells Washington D C
26 Etiology and Treatment of Convergent Strabismus T W Floyd Peoria Ill

American Journal of Medical Sciences, Philadelphia.

March

27 *Acute Dilatation of Stomach and Its Relation to Mesenteric Obstruction of the Duodenum L A Conner, New York
28 *Operative Treatment of Fractures Especially of the Long Bones J T Vaughan Washington, D C
29 *Leukemic Blood Picture in Fracture of the Ankle C E Simon Baltimore.
30 *The Luys Urine Separator B S Barringer New York
31 *Colloidal Nitrogen in the Urine W McK Marriott and C G L Wolf New York
32 *Comparative Study of Occult Blood Tests New Modification of Guaiac Reaction, Its Value in Legal Medicine. D M Cowie Ann Arbor
33 *Varicose Aneurism of the Aorta and Superior Vena Cava C Cary, Buffalo
34 Nature of General Toxic Reaction Following Exposure to Roentgen Rays D L. Edsall and R Pemberton Philadelphia
35 *Hypertrophy of Islands of Langerhans in Diabetes Mellitus W G MacCallum Baltimore.
36 *Universal Itching Without Skin Lesion Hematogenous Urobilinuria Malarial Poisoning Peculiar Erythrocytolysis J K. Mitchell and A. R. Allen Philadelphia
37 *Fibroid Tumors of Vulva. E A Schumann Philadelphia.
38 *Treatment of Diffuse Suppurative Peritonitis J A Blake New York

27 **Acute Dilatation of Stomach.**—Conner bases his study on 82 recorded cases of acute dilatation of the stomach, 2 personal cases and 18 cases of mesenteric obstruction of the duodenum He considers acute dilatation of the stomach a disease of considerable clinical importance, one which develops under a variety of conditions, but is especially frequeent after operation done under general anesthesia In the majority of cases reported, there was found an associated dilatation of the duodenum, in fact, in a large proportion of cases, about one-half the dilatation is associated with and seems to result from some form of obstruction of the duodenum The most common cause of such obstruction is found to be constriction of the lower end of the duodenum, between the root of the mesentery and the vertebral column The constriction occurs when the mesenteric root with the superior mesenteric artery, which runs in it, is stretched tightly across the duodenum as the result of traction exerted by the small intestine hanging over the brim of the pelvis Although great dilatation of the stomach would doubtless increase the liability to mesenteric obstruction by crowding the intestines into the pelvis, Conner is of the opinion that in some cases at least, the duodenal obstruction is primary The mortality among the reported cases was 72 per cent, but Conner says that there is much evidence to show that the disease can usually be controlled and cured, if the diagnosis is made and suitable treatment begun before complete collapse of the patient has occurred

28 **Operative Treatment of Fractures**—Vaughan is of the opinion that perfect adjustment in fractures of the long bones is seldom accomplished without operation, except in green stick fractures and in some transverse fractures, in which the fragments may be displaced only partially and have not overridden as in some cases of Colle's fracture He favors wire for holding the fragments together, because it is less bulky, because it can be applied with less injury to the soft parts, and because its action in holding the bones together continues longer than any of the other methods in use, except the bone ferrule He has operated in 102 cases of fracture with only two fatalities, both occurring after operation on the neck of the femur The methods employed and the results obtained are presented in full

29 **Leukemic Blood in Fracture of Ankle**—In a case of compound fracture of the right ankle, Simon observed a distinct increase in the polynuclear neurophiles, and a blood picture, which was typical of myeloid leukemia At the time of the examination the patient was suffering from a cellulitis The leg was amputated in the lower third and one week afterward, with the recovery of the patient, there was a return to normal conditions

30 **Luys' Urine Separator**—Barringer has employed this instrument with much satisfaction in fourteen cases, two male and twelve female The histories of nine of these cases are published He says that any inaccuracy of results obtained by the use of the separator is to be attributed to its employ

ment in unsuitable cases, or to a failure to recognize traumatic hemorrhage when it occurs He has found the separator invaluable in cases in which one or both ureteral openings are obscured by cystitis, in cases in which the rapid excretion of pus or blood into the bladder clouds the bladder fluid, and in cases in which in a normal bladder one or both ureteral mouths can not be found

31 **Colloidal Nitrogen in Urine**—The nitrogen which is precipitated by absolute alcohol has been termed by Salkowski colloidal nitrogen Marriott and Wolf repeated Salkowski's work with 11 specimens of urine, but do not recommend the method for clinical use In the mixture precipitated from urine by alcohol, the nitrogenous carbohydrate described by Salkowski was not found The authors state that the colloidal nitrogen of Salkowski does not bear any relation to the undetermined nitrogen

32 **Occult Blood Tests**—Cowie describes his modification of Boas' second modification of Weber's test for occult blood As small an amount as one milligram of blood is said to produce a distinct reaction with this test. To one gram of stool, softened with water, if necessary, four or five c c of glacial acetic acid is added and mixed in a glass mortar To this mixture, 30 c.c. of ether are added and allowed to extract for several minutes To one or two c c of the extract an equal amount of distilled water is added, and the whole shaken thoroughly To the resulting mixture, a few granules of powdered, guaiac resin are added, and after this has dissolved there are added 30 drops of old, water white, chemically pure turpentine By holding the container against the light, or in front of a white surface, the presence of blood is manifested by a distinct light blue color, which develops quickly in the upper half of the mixture, remains for a short time, and gradually disappears Larger amounts of blood cause a more intense blue

Cowie conducted several series of experiments for the purpose of determining whether or not the reactions for occult blood occur in the stools of individuals eating a meat diet He found that individuals eating an ordinary meat diet seldom give a reaction in the stool with the occult blood tests If a reaction occurs, it is in all probability due to some pathologic process in the gastrointestinal tract. The reader is referred to the original article for the detailed report of Cowie s experiments

33 **Varicose Aneurism of Aorta and Superior Vena Cava.**—A case of this kind is reported by Cary The patient died from rupture of the aorta into the vena cava

35 **Islands of Langerhans in Diabetes Mellitus**—MacCallum reports a case of diabetes mellitus that came to the post mortem room On examination of the pancreas he found alterations in the islands of Langerhans, but felt that these alterations could hardly be interpreted as degenerative changes nor as changes which might bring about functional insufficiency On the other hand, there were changes which seemed to indicate an actual increase in the bulk and functional capabilities of these islands The islands were very conspicuous and seemed larger and much more deeply stained than normal They were far less sharply outlined than normal and appeared to be almost everywhere directly continuous with the cells of the adjacent acini In another case, to which reference is made, the pancreas presented an appearance almost precisely similar to that seen by MacCallum

36 **Universal Itching Without Skin Lesion.**—In the case reported by Mitchell and Allen the persistent, universal itching was caused by the presence of urobilin in the circulation, which in its turn was the result of a peculiar hemolysis caused by chronic malarial poisoning The patient also suffered from Raynaud's disease, probably of the same malarial origin, slight renal irritation and general nervousness All attempts to relieve the itching were ineffectual until treatment was directed to the improvement of the blood making function, together with the employment of sweat baths and stimulating douches, and the moderate long-continued administration of iodids, mercury and arsenic

37 **Fibroid of Vulva.**—Schumann reports a case of myxomatous fibroma of the left labium majus, occurring in a woman, 45 years of age, and which had existed for eight years The tumor was extirpated without difficulty, under ether anesthesia The hemorrhage was slight and easily controlled

38 **Treatment of Diffuse Suppurative Peritonitis.**—As is known, Blake is an advocate of thorough peritoneal lavage in the treatment of diffuse suppurative peritonitis He says if one has left nothing in the peritoneum that can be absorbed there is no need of drainage If something is left which probably will not be absorbed, drainage is indicated, but one should drain only to the doubtful substance The drain is then a sort of safety valve

In comparing fatal cases, Blake finds that the employment of drainage apparently has had little influence on the results Of 78 cases of diffuse peritonitis caused by appendicitis, death occurred in 15, 7 of these were not drained and 8 were drained Of the patients who recovered, 31 were not drained and 32 were drained Of 13 patients, with peritonitis caused by perforations or ruptures of the stomach and upper intestines, 4 died, 2 of these were drained and 2 were not drained Of the 9 patients recovering, 5 were drained and 4 were not drained Of 8 patients with perforation of typhoid ulcers, 4 died, of whom 3 were drained, and one was drained through an abscess in the pelvis Of the 4 patients who recovered, 2 were not drained, and 2 were drained through the pelvis, there being abscesses present The abdominal wounds were drained in practically all the cases, the statement "not drained" refers to drainage of the peritoneal cavity Blake believes that his patients have made smoother recoveries by the omission of drainage, but that careful judgment must be exercised in every case, because some cases need drainage and some do not, some patients seem to do better with irrigation, while some get well without irrigation or drainage, and some patients die, whether drained or not, washed or unwashed

The Post Graduate

39 *Jaundice A. Pisani New York
40 Importance of Systematic Education of Hospital and Dispensary Patients Afflicted with Venereal Disease F Cabot New York
41 *Exophthalmic Goiter P Horowitz New York
42 1906 Report on Pulmonary Tuberculosis of New York Post Graduate Medical School and Hospital W J Mersereau New York.
43 *Nasal and Intranasal Primary Syphilis A Fanoni New York
44 Two Cases of Gastric Ulcer A F Chace, New York
45 Presentation of Popliteal Artery Removed from Case of Diabetic Gangrene of the Foot S Lloyd New York.
46 Diagnosis and Treatment of Gastric Ulcer R H Halsey New York.
47 Surgical Treatment of Gastric Ulcer F Torek New York

39 **Jaundice**—Three of the five cases reported by Pisani were examples of intralobular compression jaundice, one was a case of interlobular compression jaundice, while the remaining case was a good illustration of extrahepatic jaundice In all three classes there was an obstruction with escape of bile by the natural channels From a study of these cases Pisani draws the following conclusions 1 All forms of jaundice are either intralobular interlobular or extrahepatic 2 All forms of jaundice are due to obstruction of the biliary passages 3 The severity of jaundice in the intralobular and interlobular forms varies, depending on the amount of biliary radicles occluded 4 The differential diagnosis between the intralobular and interlobular forms of jaundice is generally reached after considering the history of the case and the result obtained in its treatment 5 In the extrahepatic form of jaundice in which the obstruction is due to biliary calculi it is always advisable to submit the patient to a thorough medical treatment as explained above before allowing him to submit to operative interference 6 If the obstruction does not yield promptly to medical treatment, surgical interference should be instituted at once

41 **Exophthalmic Goiter**—Horowitz reviews the clinical history of this condition and reports eight cases seven in women and one in a man In several of the cases the high frequency current was employed with some success

43 **Nasal and Intranasal Primary Syphilis**—Fanoni reports in detail the histories of four cases of primary nasal syphilis In one case there was a chancrous erosion of the [illegible] of the nose in another there was a typ[illegible] on [illegible] of the right side of the septum of the no[illegible]

a thickened, dull red, semilunar patch on the left ala nasi, and the fourth patient had a thickened incrustation of the inner aspect of the right ala nasi and of all the septum

Virginia Medical Semi-Monthly, Richmond
March 22

48 Benign Stricture of Rectum M. E Nuckols Richmond
49 *Treatment of Burns and Scalds M Moran Pinners Point
50 Case of Uncinariasis G Baughman, Richmond
51 *Treatment of Inoperable Carcinoma. S H Graves Norfolk
52 *Retropharyngeal Abscess R. Glasgow Lexington
53 Principles of Surgery S McGuire Richmond

49 **Treatment of Burns and Scalds**—An abstract of this article appears in the Therapeutic Department of this issue

51 **Treatment of Inoperable Carcinoma.**—In the treatment of inoperable carcinomas, Graves employs either caustics, Roentgen, violet or radium rays, or serum therapy He says that the selection of cases for any particular treatment is of great importance, and calls for considerable judgment and discrimination on the part of the operator He describes his methods in full, and adds that he would not recommend the use of any of these agents in any case in which the patient is in good condition and will submit to an operation

52 **Retropharyngeal Abscess**—A case of this kind is reported by Glasgow, who emphasizes the importance of careful diagnosis, digital exploration, and the necessity of prompt surgical intervention, as soon as fluctuation can be detected

Journal of the Michigan State Medical Society, Detroit
March

54 *Chronic Middle-Ear Suppuration and Surgical Interference E Amberg Detroit.
55 Comparison of the Old Time and the Modern Physician C L Girard Escanaba.
56 Relation Between Anemia and Early Stages of Tuberculosis. B R Shurly Detroit
57 Hernia H A Haynes Ionia
58 Pregnancy Diagnosis Hygiene Delivery and After Treatment F A Weaver Charlotte

54 **Otitis Media**—According to Amberg only exceptionally a chronic middle ear suppuration which does not respond to mild treatment without more thorough surgical interference should be allowed to continue He says that the less radical procedures should first be considered and that the more radical measures should not be delayed too long

Surgery, Gynecology and Obstetrics, Chicago
March

59 *Surgical Treatment of Tuberculosis of the Kidney H A Kelly Baltimore
60 *Vaginal Section as an Operation of Choice H T Byford, Chicago
61 *Tuberculosis of the Kidney C P Noble Philadelphia
62 *Hysterectomy and Removal of Body of Uterus J W Boyce Washington
63 *Comminuted Fracture of Both Ends of Radius J C Logan Pittsburg
64 *Foreign Bodies in the Vagina N W Sharpe St Louis
65 *Occlusion of Femoral Vein J C Sheldon Kansas City Mo
66 Celiac and Mesenteric Plexuses and Their Rôle in Abdominal Shock L Buerger New York City and J W Churchman Baltimore.
67 *Surgery of Typhoid Perforation J W Long Greensboro N C
68 *Primary Operations for Obstetric Debility E Reynolds Boston
69 *Reticulum in Small Round-celled Sarcoma and Lympho-Sarcomata M G Seelig St. Louis
70 *Akanthosis Nigricans W Meyer New York City
71 *Vaginal Cesarean Section J P Moran Washington D C
72 *Aid to Intestinal Suturing A P Jonas Omaha
73 *Technic of Cleft Palate Operation and Removal of Silk Sutures A M Vance Louisville
74 Symptoms of Versions and Flexions of Uterus A. Theilhauber Munich Germany

59 60 61—See abstracts in The Journal Jan 26 1907, page 351

62—See abstract in The Journal, Jan 5 1905 page 72

63 **Comminuted Fracture of Both Ends of Radius**—In the case reported by Logan, the chief interest centers in the fracture of the head of the radius although the complication of a Colles fracture of the same bone makes it of greater rarity The fracture was the result of a fall down a short flight of steps

64 **Foreign Body in Vagina.**—Sharpe reports the case of a woman 75 years old who wore a pessary for 35 years During the last 25 years the appliance had not been removed The pessary was almost completely enveloped The vagina had become distorted into an hour glass or funnel shape The pessary was very much eroded and opposite the urethra there were slight incrustations

65 **Occlusion of Femoral Vein**—Sheldon reports a case of sarcoma in the left inguinal region, which extended from a point three inches below Poupart's ligament into the pelvis It seemed to be intimately associated with the femoral vein There was considerable edema of the leg from occlusion of the femoral vein by pressure Sheldon succeeded, however, in dissecting the tumor from the leg without wounding it. No hemorrhage occurred, and six months after the operation there is no evidence of recurrence of the tumor, although the entire leg is considerably larger than its fellow The man has not been prevented from pursuing his occupation as a farmer

67 **Surgery of Typhoid Perforation.**—Long presents a brief résumé of the history of this subject and reports two cases In one case the perforation occurred on the thirtieth day of the disease, and was followed by an extensive peritonitis An operation was done successfully, but the patient succumbed nine days afterward, from acute dilatation of the stomach In the second case the perforation occurred through the walls of a Meckel's diverticulum, which sprang from the proximal side of the transverse colon An operation was done and the patient made a rapid and uninterrupted recovery

68 **Primary Operations for Obstetric Debility**—Reynolds discusses the delivery of debilitated women by operative methods, intrapelvic or abdominal, before labor, in the absence of mechanical impediments and as a method of choice

69 **Small Round-Cell Sarcoma and Lymphosarcoma**—Seelig has made a careful study of the reticulum of these two varieties of sarcoma, with a view to establishing a basis for differentiation. He found that the quantity of reticulum present varies within such broad limits and with such irregularity that it is impossible to associate definitely either type of tumor with the amount of reticulum it contains He says that inasmuch as a study of the reticulum in lymphosarcoma and in small round cell sarcoma of lymph nodes reveals no histologic differences, it is warranted and expedient to group these two types of lymph node tumors under the one head of malignant lymphomata

70 **Akanthosis Nigricans**—This paper is supplemental to one on cancer of the colon read by Meyer before the May (1906) meeting of the American Surgical Association, and abstracted in The Journal, June 30, 1906, page 2016

71—See abstract in The Journal, Jan 26, 1905, page 351

72 **Aid to Intestinal Suturing**—The double suspension loop method employed by Jonas is carried out as follows After the ends of the intestine to be sutured have been smoothly trimmed with scissors, the circumference is divided into three divisions one of the points of division being at the mesenteric attachment The intestinal ends are first brought together by a suture at the mesenteric attachments, carefully including the mesentery in the suture, then, at one of three divisions in the intestine, a round, straight, or curved needle, armed with a suture is passed in and out, including the serous and muscular coats in the bite of the needle, leaving a free margin of one-fourth of an inch for inversion The needle with the same thread is then passed over to the other intestinal end and is made to pierce serosa and muscularis in the same manner as before The needle is then removed, that part of the thread which extends between the free intestinal ends is then grasped and pulled, thus forming a loop By grasping the loop thus formed and catching the free ends of the thread, a double loop is formed A second thread is passed in the same manner as the first one, forming a second double loop The threads are now grasped with hemostats, and when pulled taut, the intestinal ends are drawn together closely with a sero serous inversion The suturing can now be done quickly and accurately by which ever suture method may be deemed advisable

73 **Points in Surgical Technic**—In order to avoid stitch hole infection in cleft palate operations, Vance uses silkworm gut and a pair of ordinary aspirator needles of small size Through one he threads a silkworm gut double, and through the other a single strand is placed The needle threaded with the double suture is passed first, the loop being pushed through after the needle, and opposite this is placed the needle

with the single thread The single suture is engaged in the loop and on withdrawing both needles, the loop pulls the single suture through, leaving it in the proper position to be tied This procedure is repeated until sufficient sutures are in place. A second point mentioned by Vance is the use of a simple little instrument for removing a silk ligature from a pedicle wherever it may be situated

Buffalo Medical Journal

March

75 *Surgical Aspect of Gastric Ulcer E A. Smith Buffalo
76 The New Pharmacy and the Old W B Birchmore, Brooklyn, N Y
77 Nature the Good Physician J D Macpherson Akron Ohio
78 *Obstruction in the Region of the Pylorus T Jameson Rochester N Y
79 Visions of Mary Czafka. F E Fronczak Buffalo

75 **Gastric Ulcer**—Smith says that although operative treatment is indicated for frequent and debilitating hemorrhages, and also for repetition of severe hemorrhage, patients suffering from a single severe hemorrhage are best treated medically Exploratory operations are recommended in obscure cases presenting gastric dyspeptic symptoms and in which gastric ulcer is suspected Smith says that certain cases of gastric ulcer are favorable ones in which to do resection of the pylorus with anastamosis between the duodenum and stomach

78 **Obstruction in Region of Pylorus**—Jameson reports two cases, in one the obstruction was caused by a large gallstone which was lodged at the junction of the cystic and common ducts, and in the other the fundus of the gall bladder adhered to the greater curvature of the stomach in such a way as to cause a bending and narrowing of the pylorus, when the stomach was distended In a third case there was stricture of the pylorus and in a fourth case a tumor mass was palpable in the region of the pylorus This patient refused operation and died from starvation after two weeks

St Paul Medical Journal

March

80 *Mitral Stenosis Cases G G Sears, Boston
81 Suppurative Otitis Media F E Burch St. Paul
82 Conservative Treatment of Suppurative Otitis Media A. C. Heath St Paul
83 Surgical Treatment of Suppurative Otitis Media C Williams St Paul
84 *Gastric and Pyloric Adhesions A. W Abbott Minneapolis

80 **Mitral Stenosis.**—Sears' paper is based on a study of 50 cases which came to autopsy The cardiac lesion was confined in 25 cases to the mitral valve, in seven others the mitral lesion was the chief finding, but was combined in two with chronic fibrous pericarditis and in five with inflammation of the aortic valves Aortic stenosis complicated nine other cases, aortic insufficiency three and tricuspid stenosis six. In four of the latter aortic regurgitation was also present and in one case aortic stenosis

84 **Gastric and Pyloric Adhesions**—Abbott reports six cases which illustrate the clinical importance of adhesions in the gastric region as a cause of symptoms, the etiology of which is often overlooked Abbott says that many cases of so-called nervous and hysterical dyspepsia are due to adhesions about the stomach and pylorus, and that in all cases in which an operation is done for ulcer, pyloric obstruction or gall bladder disease, the operation should be considered incomplete unless a thorough exploration for adhesions has been made and those adhesions corrected, so far as possible

Interstate Medical Journal, St Louis

March

85 *Hydronephrosis A T Cabot Boston
86 Psychotherapy M V Bliss St Louis
87 *Resurrection Days M Frank Chicago
88 The Roentgen Ray as a Diagnostic Aid. F H Skinner Kansas City Mo
89 Surgery Among the Chinese T H Kee Manila P I

85 **Hydronephrosis**—Cabot reports four cases of traumatic hydronephrosis and two of true hydronephrosis

87 **Resurrection Days**—Frank writes about the days in England and Scotland when the study of anatomy was surrounded by great difficulties because of the scarcity of anatomic material the bodies being "snatched" usually by professional "body snatchers, most of whom came to grief through the efforts of the law

Journal of the Arkansas Medical Society, Little Rock.

March 15

90 Pathology of Carcinoma of the Uterus. N Klein Texarkana
91 Advantages of the Pneumatic Sigmoidoscope Over the Ordinary Proctoscope. W V Laws, Hot Springs.
92 Tubal Pregnancies P Hunt Texarkana.
93 *The Physician and Nostrum. E. Bok Philadelphia
94 Importance of a Clear Understanding of the Vasomotors and the Utilization of Their Function to Get Best Therapeutic Results W C Abbott Chicago
95 Premature Burial J J Johnson Biggers Ark.

93—This article also appeared in THE JOURNAL, Feb 23, 1907, page 688

Indiana Medical Journal, Indianapolis

March

96 Use of Forceps L P Drayer Fort Wayne, Ind
97 Case of Cesarean Section J Kolmer Indianapolis
98 Poisoning by Illuminating Gas. C Sudranski Greencastle, Ind
99 Surgical Physiology of the Circulation G Crile Cleveland
100 *Management of Eczema I C Johnston New York.
101 Cheerful Literature for Convalescents Mrs C Smith Cincinnati.

100—This article appeared in the *New York Medical Journal*, Oct 20, 1906, and was abstracted in THE JOURNAL, Nov 3, 1906, page 1512

Medical Sentinel, Portland.

March

102 Modern View of Neurasthenia and Its Treatment R. L Gillespie Portland
103 Diagnosis and Treatment of Ulcer of the Stomach C E Sears Wallace Idaho
104 Technic of Abdominal Operations A. R Cunningham Spokane Wash
105 Expert Testimony on Insanity W Everly Seattle.
106 Diffuse Septic Peritonitis T J Costello Lewiston Idaho

Western Medical Review, Omaha

March

107 Pulmonary Stenosis H L Ewing Lincoln
108 Surgery of the Gall Bladder R H Rhoden Fremont
109 Duodenal Ulcer with Report of a Case of Perforation M J Ford Omaha
110 Facts of Importance in Behavior of Certain Infections D W Beattie Neligh

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FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

March 23

1 *Clinical Experience with Spinal Analgesia A E Barker
2 *Infiltration Anesthesia in Major and Minor Surgery G J Arnold
3 *Cholelithiasis E S Bishop
4 *Removal of Enlarged Tonsils R Maclaren
5 *Case of Gastroenterostomy Combined with Gastrostomy for Ulceration of the Stomach B G A Moynihan
6 *Insanity Its Causes and Increase G H Savage

1 **Spinal Analgesia**—After a very careful study of spinal analgesia in 100 cases, Barker gained the impression that there is undoubtedly a place for spinal analgesia in surgery, but only when those who would employ it have studied its theory and practice fully so far as they are known He says that it is not for casual use by the inexperienced

2 **Infiltration Anesthesia**—Arnold believes firmly in the value of infiltration anesthesia for both major and minor operations His own list of operations include the following Gastrostomy, herniotomy, suprapubic cystotomy, closure of an artificial anus, laparotomy for intestinal obstruction, radical cure of varicocele removal of a mass of suppurating tuberculous glands in the groin, extirpation of the saphenous vein and its tributaries for varix Arnold says that by a combination of regional anesthesia of the great nerve trunks, and local infiltration at the seat of operation major amputations can be performed without general narcosis

3 **Cholelithiasis.**—Bishop discusses the history of cholelithiasis He lays great stress on eliciting pain on pressure over the affected bile channel, as a diagnostic symptom

4 **Tonsillectomy**—Maclaren prefers to operate with the patient under the influence of a general anesthetic and in the lateral posture The tonsil is dissected out carefully, traction being made on the gland with a vulsellum forceps, either with a sharp pointed scalpel or with blunt dissectors, depending on the firmness of the gland and the degree of its attachment to

the underlying structure There is said to be only a moderate amount of bleeding, which is controlled easily by finger pressure. The gland when thus removed has never returned Healing is generally complete in about ten days

5 **Gastroenterostomy and Gastrostomy**—The patient, on whom these operations were performed by Moynihan suffered from extensive ulceration of the stomach and consequent stenosis of the pylorus, the result of the accidental swallowing of hydrochloric acid A posterior gastroenterostomy was performed in the usual manner, the opening in the stomach being made nearer to the cardiac orifice than usual The gastrostomy opening was made on the anterior surface midway between the curvatures and well toward the cardiac end A rubber drainage tube was passed through this opening into the stomach and out again through the gastroenterostomy opening into the distal limb of the jejunum The patient was fed through this tube for 17 days, when food was again given by the mouth The tube was removed in the fourth week and the patient has made a complete recovery

6 **Insanity**—Savage sums up his paper as follows Heredity has a small share in the causation of general paralysis, it is more frequently seen in relationship with melancholic than maniacal states This has some connection with the longer life of persons nowadays They not infrequently show the weight of years in mental depression Melancholic states are much more likely to recur in families than maniacal disorders, all forms of insanity, especially sensory hallucinations and their resulting delusions with fixed obsessions, are chiefly dependent on hereditary taint, moral imbecility and asocial and criminal tendencies often arise in very neurotic families Idiocy, mental weakness and eccentricity are common in the children of physically decadent parents There is no such thing as transmission of any form of insanity direct, but there is a distinct danger of the passing on of a nervous instability which leads to mental disorder resulting from slight or even normal physiologic strain Insane parents may have sane children Consanguinity alone does not produce mental disorder Eccentric and nervous (not insane) parents may give rise to whole families of idiots or defectives

The Lancet, London

March 23

7 *Permanent Defenses of the Body B L. Abrahams
8 *Acute Infective or Toxic Conditions of the Nervous System E F Buzzard
9 *The Renal Function in Its Relation to Surgery J W T Walker
10 *Carcinoma Mammæ in the Mouse E F Bashford and J A Murray
11 Opsonins and Immunity J L. Bunch
12 Rôle of Blood Plasma in Disease. H Campbell
13 *Tests for Acetone in the Urine. B J F Jacksontaylor
14 *Case of Rupture of Very Early Extrauterine Pregnancy Laparotomy Recovery C A S Ridout.
15 *Case of Strangulated Hernia Associated with Acute Hemorrhagic Pancreatitis W H Brown

7 **Permanent Defenses of the Body**—Under this heading Abrahams discusses the physiologic reserve or the power which each organ, each tissue, each cell has of calling up its own latent energy in its defense, and the biochemical interrelation of organs, by which one of them can, by chemical means, evoke in another changes which act in its defense, and the nervous mechanism, by which the main organs can call to their aid, not only each other but the nervous system as well

8 **Acute Infective or Toxic Conditions of the Nervous System.**—In this the second of the Goulstonian lectures, Buzzard takes up the consideration of acute poliomyelitis He believes that the following conclusions concerning this disease are justifiable

1 It is an acute specific fever occurring sporadically and epidemically, differing from many others but resembling some—variola, for instance—in the facts that its lesions may be discrete or confluent and that its results may be permanent 2 Its essential lesion is an inflammation of the interstitial tissue of the central nervous system due to the presence of micro-organisms or their toxins probably in the blood (but possibly in the lymph) circulating within that system 3 The fact that the gray matter suffers more than the white matter is explained by the greater vascularity of the former and the resistant character of the component parts of the latter 4 The same morbid process underlies some cases of encephalitis, both of the brain stem and the cerebrum, among which may probably be included many examples of infantile hemiplegia. 5 The bacteriology is at present practically an unknown quantity Bacteriologic investigation of the blood, as well as of the cerebrospinal fluid, is indicated, and more complete examination of other organs, especially of the intestines

9 **The Renal Function in Relation to Surgery**—In his second Hunterian lecture, Walker discusses the methods at the disposal of the surgeon in estimating the function of one kidney

10 **Carcinoma in Mouse**—Bashford and Murray describe certain anatomic and pathologic features of sporadic tumors of the mouse

13 **Test for Acetone in Urine**—Jacksontaylor believes that the sodium nitro prussid test may be rendered more simple, delicate and accurate by substituting strong ammonia for the liquor potassæ and by eliminating the use of acetic acid The ammonia solution remains on top, and if acetone is present, even in minute quantity, a well marked and absolutely characteristic ring of magenta or petunia appears at the junction of the two fluids, within from one to three minutes, and gradually spreads upward, pervading the whole of the ammonia solution if acetone is present in considerable amount

14 **Rupture of Extrauterine Gestation**—In Ridout's case the rupture occurred at about the fourth week of pregnancy The embryo occupied a position in the region of the isthmus of the left tube The signs and symptoms presented by the patient pointed to internal hemorrhage of an extensive character

15 **Strangulated Hernia and Acute Pancreatitis**—Brown's patient, aged 60, had enjoyed good health up to the time that symptoms of strangulation of a right inguinal hernia manifested themselves The herniotomy was done, but did not afford the patient much relief from his symptoms He died the next day, and at the necropsy the disease of the pancreas was discovered The symptom from which the patient suffered most was vomiting

The Clinical Journal, London

February 27

16 Fecal Leaks and Fistulæ C B Lockwood
17 *Asthma in Infants and Children E Cautley
18 *Dysmenorrhea T G Stevens

March 6

19 *Psoriasis H R Crocker
20 *Prevention of Pain After Surgical Operations J T Clarke

March 13

21 Treatment of Rickets G A Sutherland
22 *Surgical Treatment of Ascites L A Bidwell
23 Real and Apparent Differences in Incidence of Cancer F F Bashford

March 20

24 *Present Position of the Radical Operation for Inguinal Hernia W M Eccles
25 Real and Apparent Differences in Incidence of Cancer F F Bashford

17—An abstract of this article will appear in the Therapeutic Department of THE JOURNAL, April 27

18 **Dysmenorrhea**—Stevens declares that alcohol should be forbidden and morphin never prescribed for dysmenorrhea He reviews the treatment usually employed for this condition

19 **Psoriasis**—Crocker says that the specifics which experience has shown to be most useful in psoriasis are arsenic, thyroid extract salicin, and in a few cases, mercurial injections Locally, tar and chrysarobin may be used If there is great inflammation, Crocker treats the case as if it were one of eczema

20 **Prevention of Pain After Operations**—Clarke says that the three causes of pain after operations are tension, movement and inflammation and that by adopting procedures which will obviate the occurrence of these conditions, no pain will be felt by the patient after operation

22 **Surgical Treatment of Ascites.**—Bidwell discusses simple tapping and laparotomy He advises making the preliminary incision through the skin before introducing the trochar so as not to drive into the abdominal cavity any portion of the epidermis, to avoid passing the trochar through the skin

which is so difficult to sterilize and to insure rapid union of the wound. The edges of the wound are approximated with a horse hair or silkworm gut suture, and then a dressing is applied and fixed with collodion In this way prompt healing of the wound is secured

24 **Radical Operation for Inguinal Hernia**—Eccles says that the radical operation for inguinal hernia is now well established, has a very low death rate, is very highly successful, and renders a large number of members of the community fit to take their place without the inconvenience and danger of a hernial protrusion.

Medical Press and Circular, London.

February 27

26 Treatment of Concomitant Convergent Strabismus J B Story
27 Gynecology of To day and Fifty Years Ago W D Spanton
28 *Membranous Dysmenorrhea S J Aarons
29 Large Fibromyoma of Uterus J H Dauber

March 6

30 *Empyema of the Maxillary Antrum P Dempsey
31 Psycho rhythm and Recurrent Psychoses (To be continued.) T B Hyslop
32 The Poor law Medical Service in Ireland. T Donnelly
33 Case of Fatal Extravasation of Urine from Ureter Caused by Ulceration Due to Minute Calculus R Johnson

March 13

34 *Pneumococcal Infections Requiring Surgical Treatment E. W S Carmichael
35 *Therapeutic Notes W Carter
36 Points in Treatment of Enlarged Prostate L C Gunn
37 Psycho-rhythm and Recurrent Psychoses T B Hyslop
38 Case of Renal Calculus Simulating Appendicitis S J Ross

March 20

39 *Diabetes T K. Monro
40 *Syphilis Simulating Typhoid. J D Rolleston
41 Prognosis and Treatment of Lobar Pneumonia J O Affleck.

28 **Membranous Dysmenorrhea.**—Aarons reports four cases of membranous dysmenorrhea with the passage of a cast from the uterus

30 **Empyema of Maxillary Antrum.**—Dempsey's method of treatment is based on that advocated by Bonninghaus It is described in full

34 **Pneumococcal Infections Requiring Surgical Treatment**—Carmichael discusses the pneumococcal infections of the serous and synovial membranes and of tendons

35 **Therapeutic Notes.**—Carter discusses briefly the use of trypsin in the treatment of cancer, the use of oil of turpentine in a case of rapidly recurring hemorrhagic effusion into the left pleural cavity, the use of Warburg's tincture (tinctura antiperiodica, N F) in the treatment of cases of malarial fever that resist quinin, and the use of strychnin and arsenic in the treatment of chorea

39 **Diabetes.**—Monro discusses the clinical history of diabetes and sounds a note of warning in reference to the use of the so called diabetic bread which, he says, is not always reliable because too often it is loaded with starch He advises applying the iodin test to make sure that the bread is sufficiently free from starch

40 **Syphilis Simulating Typhoid**—Rolleston reports two cases of syphilis that simulated typhoid fever Typhoid was excluded by a persistently negative Widal reaction

Annals of Tropical Medicine and Parasitology

February 1

42 Insects and Other Arthropoda Collected in the Congo Free State R Newstead J E Dutton and J L Todd.
43 Description of Two Species of African Ticks G Neumann
44 Parasites in the Museum of the School of Tropical Medicine Liverpool A Looss
45 Presence of Spirochæta duttoni in the Ova of Ornithodoros moubata R M Carter
46 Therapeutics of Trypanosomiasis B Moore M. Mereństein and J L Todd

Annales de l'Institut Pasteur, Paris

Last indexed page 1219

49 (XXI No 2 pp 81 160) *Campaign Against Malaria in Algeria (Algérie—1906) E Sergent
50 *Experimental Hypersensitiveness and Anti hypersensitiveness to Horse Serum (Anaphylaxie et anti anaphylaxie) A. Besredka and I Steinhardt Id (Phénomène d Arthus) Nicolle
51 *Syphilitic Antibodies in Cerebrospinal Fluid in General Paralysis (Anticorps syph) A Marie and C Levaditi
52 Inefficacy of Radium in Treatment of Rabies (Rage et radium) A. Calabrese

49 **Campaign Against Malaria in Algeria**—Sergent divided the country into zones and has applied prophylactic measures in one zone after another as they were reached in turn in the course of five years Comparison of the results in a protected zone and in the unprotected adjacent zone has provided a most striking example of the benefits of the prophylactic measures The weeds were mown once a month, the suspicious pools of water were petrolized, and oil was sprayed with a garden pump into the recesses of the barns and outhouses followed by spraying with twice the amount of water to kill the adult mosquitoes The houses were all screened, and adults took 20 c.c of quinin one day with 40 c.c. the next Illustrated circulars were distributed, containing advice for protection against malaria, and placards with the same were posted in all the cars, depots, postoffices and other gathering places Large colored posters were placed in the schools, city halls and depots The picture postal card was also pressed into service to extend the knowledge in regard to transmission of malaria by mosquitoes and the new prophylactic measures based thereon The conditions in the different zones are tabulated for comparison, the tables giving the "reservoir for the virus" in the inhabitants with enlarged spleens, and stating the possible breeding points for the mosquitoes in the ponds, etc

50 **Experimental Hypersensitiveness to Horse Serum Anaphylaxis**—Besredka and Steinhardt have been studying the liability to severe and even fatal symptoms noticed when guinea pigs, which have served for dosage of antidiphtheria serum, are injected with horse serum from 10 to 12 days later Control animals are not affected The same injection of horse serum made before the end of the 10 or 12 days seems to be harmless for the animal More than this, it seems to induce the protection of antibodies, which have the effect of vaccinating the animal The anti anaphylactic action seems to follow very closely the injection of the horse serum, even a single intraperitoneal injection of 5 c c. of horse serum was able to confer immediate immunity, allowing the animal to bear without injury an injection of 0 25 c c of horse serum directly into the brain in less than two hours afterward. This immediate immunity conferred on the brain in less than two hours after intraperitoneal injection, is regarded by the writers as absolutely unprecedented in science The organs of the animals in which this anti anaphylaxis had been induced did not display any specific properties when tested later It seems probable that the sensitized guinea pig, after having served for the dosage of diphtheria serum although it appears healthy, yet in reality has some latent lesion in the brain Direct injection of the horse serum into the brain arouses this latent lesion to fatal activity Nicolle reports research on the same subject, especially that phase known as the "phenomenon of Arthus" His conclusions are that it is due to the production of a special and specific antibody in response to repeated injection of horse serum

51 **Hemolytic Test in General Paralysis**—Marie and Levaditi have been experimenting with the hemolytic test based on the absence of hemolysis in a sample of blood when the serum to be tested has been added to the fluid In examination of the cerebrospinal fluid of 17 patients without general paralysis the hemolytic test was invariably negative, while it was positive in 73 per cent of 39 patients with various phases of general paralysis and was constant in the more advanced cases In nine cases of tabes or tabo paralysis the proportion was only 66 per cent Their experiences demonstrated further that syphilis alone or a brain lesion alone is not able to induce positive findings Positive results are observed only when there are syphilitic lesions affecting both cortex and membranes and when these lesions are in an advanced stage Whether the antibodies in the fluid causing the positive response to the test are really syphilitic antibodies or not can not be decided at present Experiments on apes are now under way in an endeavor to solve this problem

Bulletin de l'Académie de Medecine, Paris

53 (LXXI No 9 pp 317 338) Optometric Scale to Exclude Simulation (Echelle optométrique polyoptotypique) Armaignac
54 *Experiences with Sleeping Sickness (M du 11) Thiroux and Anfreville Id L Marx
55 (Nos 10 11 pp 339 374) *Decortication prema. (Décortication du poumon Delorme) L Picqué and Delorme

54 **Experiences with Sleeping Sickness**—Thiroux and Anfreville report seven cases of sleeping sickness among the natives of Senegal The cases were all imported, the disease not being endemic in this French colony Martin reports five cases of the disease treated at the Paris Pasteur Institute in white men returning from a sojourn in Africa Laveran presented their communications and discussed their conclusions, giving also a historical sketch of the various methods of treating sleeping sickness to date Some of these patients were practically moribund when first seen, but the others are apparently cured The medication was mostly with arsenic, alone or with strychnin, or a combination of a stain—trypan red—and arsenious acid The native patient cured is a lad about 13, and Laveran suggests that the disease may be more easily cured in the young than in adults Four of the white patients have practically recovered, but symptoms recurred and the trypanosomes were found again in the blood whenever the treatment was suspended for any length of time, and there is still auto agglutination of the red corpuscles Martin gives the arsenic every fifth day at first and then every eighth day, keeping it up for months

55 **Decortication of the Lung for Chronic Empyema.**—Picqué reports a case of persisting empyema after an extensive stab wound in which three operations with resection of ribs and the Estlander operation had failed to relieve He then performed the operation advocated by Delorme, which he calls decortication of the lung Marked improvement followed at once, and in three weeks exercises to strengthen the lung function were commenced The Roentgen rays reveal the dilatability of the lung and also the thickness and the resistance of the encapsulating membrane A pleuro pulmonary process induces the formation of a more adherent membrane than a pleural process alone The best results are attained with chronic purulent streptococcus and staphylococcus pleurisies Delorme does not advise decortication of the lung except when the lung remains immovable in spite of respiratory exercises commenced soon after the empyema is incised, especially when the suppurating cavity extends for 6 cm, that is, when the surface of the lung is from 6 to 8 cm below the wall of the thorax He cuts a flap including the third and sixth ribs, on the anterior lateral wall of the thorax, the base above at the back Turning back this flap, he makes the toilet of the pleural cavity and the surface of the lung, and then incises the encapsulating shell that imprisons the lung, taking care not to injure the parenchyma After mobilizing this shell, he excises it as completely as possible, and the lung at once expands and even protrudes through the opening in the wall of the thorax The article is illustrated

Archiv f klinische Chirurgie, Berlin.

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56 (LXXX No 4 Pp 845-1031) Operative Treatment of Fractures (Op Behandlung von Fract.) E Ranzi
57 *Pathology and Treatment of Benign Bladder Tumors. (Gutartige Harnblasengeschwülste) M Weinrich
58 Typical Fracture of Radius (Fract. des Radius) K. Poulsen
59 *Physio-pathologic Study of Induced Hyperemia. (Venöse Hyperämie.) E. Homberger
60 *Ligation of Thyroid Arteries for Goiter (Unterbindung der Schilddrüsenarterien beim Kropfe) B P Enochin
61 *Method of Anastomosis in Gastrointestinal Tract. (Neue Methode zur Herstellung von Anastomosen am Magendarmtrakte) J M Flint
62 Experiences with Resection of Tumors in Cecum and Colon at One Sitting (Einzeitige Res von Coecal und Colontumoren) J Bales
63 *Surgical Treatment of Non cancerous Gastric Affections (Nicht krebsige Magenleiden) Gelpke
64 *Transplantation of Thyroid Tissue into the Spleen (Transpl von Schilddrüsengewebe in die Milz.) E. Payr

57 **Treatment of Benign Growths in the Bladder**—Weinrich describes three cases which he thinks illustrate the great value and the good results of Nitze's intravesical technic in treatment of papillomata of the bladder One patient was a physician and he returned three years after the first operation to have it repeated on account of return of the growths He has since been permanently cured The first patient has been cured for 10 years to date

59 **Theoretical Study of Bier's Induced Hyperemia.**—Homberger concludes his article with the statement that with an inflammatory focus outside of the part that is bright red from the influx of arterial blood, and inside of the region beyond, which is bluish from venous congestion, there is always a zone in which there is hyperemia, and in which oxidating processes are going on with great energy The blood is unusually rich in carbonic acid, but the waste is rapidly deported, thus ensuring increased warmth This venous hyperemia ensures increased oxidation, and this is what is accomplished by Bier with his constricting band This method does not detract in any way from the value of the old, tried methods of application of cold to inflammation After the first contraction under the influence of the ice bag, the vessels become widely dilated, including the veins The cold transforms the arterial hyperemia—in which the oxygen is swept along too rapidly to be utilized—into a venous hyperemia The latter does not differ in any pathologic-anatomic respect from that induced by Bier's constricting band

60 **Ligation of Thyroid Arteries for Goiter**—Enochin gives an illustrated description of six patients with large vascular goiters improved by ligation of the thyroid arteries This procedure is indicated only in this class of goiter, but it is followed by a progressive reduction in the size of the goiter and subsidence of the subjective disturbances In some cases the general nutrition is much improved, but the cosmetic result is comparatively slight In ligating the inferior thyroid artery, he includes the artery and its encircling connective tissue in the ligature, according to Drobnik's technic. A double ligature is not indispensable A drain between the carotid artery and the spine is liable to cause injury to the vessels

61 **New Method of Anastomosis**—Flint has devised a cutting instrument with which he claims it is possible to unite any two hollow organs without soiling the field of operation with the contents of either It consists of scissors, one blade 16 cm and the other 25 cm long, both tapering to a needle point The walls of the organ to be anastomosed are sutured together The blades of the scissors are then run through the walls, parallel to the row of sutures, a short distance above them A second row of sutures is then taken beyond the place where the scissors are run through the walls After these sutures are drawn up and tied, the walls between the two rows of sutures are cut through with the scissors, bringing the two blades together and then pulling out the scissors entirely No opening is thus made into either organ until after the two have been firmly united both above and below the opening He says that in gastroenterostomy and enteroanastomosis on 24 dogs the method has proved its great simplicity, rapidity of execution and the rapid healing of the wound by primary intention The operation was also done on the intestine of the cadaver, after filling the intestine with water, not a drop of water escaped during the operation The communication issues from Paltauf's Institute for General and Experimental Pathology at Vienna

63 **Surgical Treatment of Non Cancerous Stomach Affections.**—Gelpke discusses plastic operations on the pylorus and fixation of the stomach, and asks if they should not be preferred to gastroenterostomy in non cancerous cases, and if this combination does not deserve wider application His results with five patients thus treated have been most excellent. One patient was a woman of 53 who had suffered for years from gastric disturbances The stomach was much enlarged, reaching to the symphysis A plastic operation on the pylorus plus gastropexy banished all disturbances, and the patient gained 30 pounds in weight and has had no further symptoms during the two years since In the case of a man of 58 with extreme dilatation of the stomach from cicatricial stenosis, a similar operation restored approximately normal conditions A woman of 40 with extreme gastroptosis and incoercible vomiting has been free from symptoms since the operation was performed as also a fifth patient, a paretic, with ulcer symptoms for 22 years In two other cases a simple plastic operation on the pylorus cured all the disturbances resulting from cicatricial stenosis of the pylorus In two other cases gastroptosis was treated by fixation of the stomach and the results have been permanent for several years to date The simple operation of gastropexy, he thinks is indicated as much as nephropexy for wandering

kidney, and is less difficult and dangerous than the latter He had to perform a laparotomy two years afterward on one of his patients for another cause, and found the stomach still solidly fastened in the region of the costal arch He fastens the middle of the anterior stomach wall, parallel to the greater curvature, to the lower costal arch, passing the needle around the cartilage, or else to the anterior abdominal wall at this level If convenient, he brings the thread through the entire abdominal wall, using strong silk and taking firm hold He works through a median incision as the pylorus may require a plastic operation at the same time

64 **Transplantation of Thyroid Tissue into the Spleen.**—The picture of an apparently normal little girl accompanies Payr's communication, showing the unmistakable improvement in the child with severe infantile myxedema, whom he treated by implantation of thyroid tissue in the spleen. The operation was done in December, 1905, and his report was mentioned in The Journal, Feb 2, 1907, page 460 The hair nails, manner of holding the head and tongue no longer differ from that observed in normal children, and the child has grown 12 cm in less than nine months, with corresponding improvement in intelligence The thyroid implanted was taken from the mother

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65 (XXXIV No 1 pp. 1 32.) *Simplification of Total Resection of Ribs for Empyema. (Total resektion des Brustkorbes) C Bayer
66 Apparatus for Cupping Treatment. (Therapie mittels negativen Luftdruckes nach Bier Klapp) O Salkindsohn.
67 New Esophagoscope (Oesophagoskopie.) T Kölliker
68 (No 2, pp 33-64) *Special Syndrome of Streptococcus Appendicitis (Zur App Frage) E Haim.
69 *Illumination of Operating Rooms (Beleuchtung etc.) L. Heidenhain
70 *Mishap from Spinal Anesthesia (Folgeerscheinung nach Lumbalanästhesie) F F Goldmann
71 (No 3 pp 65 88) Tennis Elbow (Tennis-Ellbogen) G Preiser
72 (No 4 pp 89 112) Cause of Post-operative Pneumonia (Entstehungsursache postop Pneumonien) G Engelhardt.
73 Suprahyoid Pharyngotomy (Pharyngotomia) J K. Spisharny
74 (No 5 pp 113 144) Plastic Operations on Peritoneum with Isolated Pieces of Omentum (Peritonealplastik) S S Girgolaff
75 Latent Changes in Appendix Under the So-called Medical Cures (Latente Veränderungen des Wurmfortsatzes) P Fiori.
76 (No 6 pp 145-176) *Operative Treatment of Muscular Wry neck (Muskulär Schiefhals) Gerdes

65 **Simplified Operation for Old Chronic Empyema.**—Bayer describes a technic which answers the same purpose as Schede's resection of the thorax wall, while it is much less serious as the soft parts are all retained A vertical incision is made about two fingers' breadths back of the anterior axillary line It crosses all the ribs at the anterior origin of the serratus magnus, commencing at the third rib and extending to the ninth and tenth This incision does not injure any large blood vessel or involve any large muscle Through this incision the ribs are subperiosteally resected for about 2 cm The entire wall of the thorax is opened with the thermocautery, in the zone thus left without ribs, and, after inspecting the cavity, the ribs were resected to right and left as required It is astonishing he says how easy it is to shell out the ribs under these conditions, resecting them for as long stretches as deemed desirable with the greatest ease The operation is further facilitated by a supplementary incision parallel with the lowest rib the first, perpendicular incision crossing it in the middle If the wall of the thorax is very rigid it may be necessary to scrape the costal pleura and to make a few cross cuts Only in case of a tuberculous process does he think it necessary to sacrifice the wall of soft parts He gives illustrations of two patients operated on by this technic. The wall of the thorax does not sink in so far as by the Schede technic while the scars are much less prominent The retention of all the soft parts reduces the resulting disfigurement to almost nothing

68 **Importance of Bacteriology of Appendicitis.**—Haim thinks that important data can be learned from bacteriology which will serve as guides in treatment If the observations of others confirm his own experience, it will be found that appendicitis due to the streptococcus occurs in an epidemic form in spring and fall, while it is seldom observed at other seasons It affects the young especially, and prognosis is good for them, but the rare cases of streptococcus appendicitis in the elderly almost invariably terminate fatally Streptococcus appendicitis requires immediate intervention, while the comparatively milder colon bacillus appendicitis may heal without intervention It is possible that the varying statistics of different writers on apppendicitis are due to the varying bacteriology of their cases Haim asserts that in the Scandinavian countries the colon bacillus and the pneumococcus seem to be the general causal agents while in Italy and England the colon bacillus alone is incriminated. In Germany, France and possibly also in America, the streptococcus and the colon bacillus are the germs at work He has noticed certain symptoms as especially frequent in certain streptococcus epidemics of appendicitis, such as herpes or icterus and thinks that by collecting sufficient data it may be possible to differentiate the severe from the mild cases by the specific symptoms observed and the bacteriologic findings

69 **Illumination of Model Operating Room at Worms**—Heidenhain has four large 1 ampere electric lights suspended from the ceiling to form a rectangle about nine feet above the floor The operating table stands in the square formed by the lights, and is thus illuminated from all sides The shadow cast by one lamp is illuminated by the light from the other three lamps The walls and ceiling are of white tiles, but a dado of dark blue tiles runs around the room to rest the eyes Krönig insists that with white walls and electric light the eyes must have some place where they can rest and as a protection against being dazzled The light of a powerful arc lamp outside the operating room enters through an opening in the wall and is focused on a mirror from which it can be reflected into the abdomen or other body cavity by adjusting the mirror

70 **Severe After Effects of Spinal Anesthesia**—Goldmann relates the history of a man of 52 who was operated on under chloroform and morphin for hernia The operation was tedious, lasting fully two hours, but the patient soon recovered Two months later he returned for herniotomy on the other side an insignificant operation for a small reducible hernia This time the operation was done under spinal anesthesia The anesthesia persisted for five hours and was followed by severe pains in the feet and calves back arms and neck, being most severe in the heels Large doses of morphin were required to relieve the patient The pains continued for two weeks The second day after the operation the heels showed symptoms of gangrene and the skin of the heel became mummified down to the fascia The patch of gangrene on each heel was about the size of the palm of a hand, and Goldmann ascribes it to a trophic disturbance, the result of the spinal anesthesia The patches finally healed but the patient still complains of diffuse pains especially headache, but without objective findings and he presents the aspect of neurasthenia

76 **Operative Treatment of Muscular Torticollis**—Gerdes states that he has obtained most excellent results in 11 cases of wry neck in which he divided the scalenus anticus This is a comparatively simple operation while the results are fully as good as with more complicated technic and it insures against recurrence better than mere tenotomy When abnormally shortened the scalenus anticus causes curvature of the vertebræ in the neck He was unable to find any record of treatment of wry neck by division of this muscle, but he has found that the deformity is corrected when this muscle is severed He has thus operated on 11 patients since 1897 with excellent and permanent results He makes a transverse incision about 5 or 6 cm long a finger's breadth above the clavicle beginning over the tendon of the sternal portion Both tendons are then divided near their origin and also the fascia of the neck until the jugular vein is completely exposed Then the posterior belly of the omohyoid muscle is drawn upward and outward and the jugular vein is drawn inward This exposes the scaleni and the phrenic nerve is seen a white cord running across the scalenus anticus with the brachial plexus over the scalenus medius The scalenus

anticus is then isolated with a blunt instrument, care being taken to avoid injury to the phrenic nerve, the plexus and the jugular vein, the scalenus anticus is divided over the subclavian artery which lies beneath it It is easily severed and a distinct snap can be heard In the depth of the wound the transverse process of the seventh cervical vertebra can be felt Any existing tendency to cervical scoliosis is at once corrected by the operation It is not necessary to divide the scalenus medius He tampons the small incision for forty eight hours, and after the fourth day commences active and passive exercises, continuing them as required for three or six weeks He does not approve of supporting apparatus, but trusts exclusively to the early exercises As division of the scalenus protects better against recurrence than mere tenotomy, while the scar is no more prominent, he advises this technic in all cases of wry neck, even the milder forms

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77 (XXXI No 3, pp 65 96) *Experimental Study of Remote Results of Spinal Anesthesia (Spätfolgen der Lumbalanästhesie) A Falkner
78 *Three Female Monsters Born to Same Parents (Reihe missbildeter Mädchen) E Schirmer
79 Locking Device for Forceps. (Zangenschloss) O Rapin
80 Care of Abdominal Walls During Pregnancy and After Childbirth (Pflege der Bauchdecken) W N Clemm
81 (No 4, pp 97 128) Spontaneous Expulsion of Entire Muscular Wall of Cancerous Uterus After Cauterization with Zinc Chlorid (Spontane Ausstossung etc.) A Blau
82 Malformation of Genitalia complicated by Myoma (Missbildung der Geschlechtsteile mit Myombildung kompliziert.) A. Czyzewicz
83 Eclampsia without Convulsions (Eklampsie ohne Krämpfe) Schlutius
84 Pregnancy and Normal Childbirth After Operative Treatment of Chronic Inversion of the Uterus (Op geheilter chron Uterusinversion) Born
85 (No 5 pp 129 168) Disturbances in the Separation of the Decidual Layer at the Point of Reflection and Their Relations to Abortion Placenta circumvallata and Exchorionic Development of the Fetus (Störungen der Deciduaspaltung am Reflex Basalisswinkel etc.) P Kroemer
86 *Method and Technic of Pubiotomy (Technik der Hebotomie) L. Seeligmann
87 Instrumental Dilatation in 3 Cases of Placenta Prævia (Die Methode Bossi) E Guasoni
88 Retention of Membranes Treatment (Eihautretention) Bollenhagen
89 (No 6 pp 169 200) *Ventrofixation (Ventrifixur) W Liepmann
90 *Osteomalacia and Suprarenals (Nebennieren und Osteomalakie) L M Bossi First part in No 3
91 Pregnancy After Steam Cauterization (Graviditüt nach Atmokausis) P Meyer
92 Technic of Steam Cauterization (Technik der Atmokausis) L. Pincus
93 Treatment of Asphyxia Neonatorum with Infusion of Oxygen (Sauerstoff Infusionen) L. Seitz

77 **Experimental Study of After-Effects of Spinal Anesthesia**—Falkner writes from Chrobak's clinic at Vienna to relate the negative results of a series of researches undertaken on rabbits to determine whether intraspinal injection of an anesthetic, according to the usual technic for spinal anesthesia, would have any permanent effect on the elements of the central nervous system He reviews the various mishaps that have been reported as occurring in the clinic, but he was unable to detect any changes in the nervous system in the animals for which the anesthetic could have been responsible

78 **Series of Female Monsters from Same Parents**—Schirmer relates the history of a healthy married couple, with healthy antecedents who had 8 children The first three were boys, all robust children, then followed a girl with half of the head wanting then a robust boy then another girl with the same deformity then a strong healthy boy These seven children were born in the course of fourteen years An interval of seven years then elapsed, and a third girl was born presenting the same deformity as the others He thinks that this remarkable series of female monsters confirms the assumption that the sex of the embryo is determined in the ovum and that each sex has its own separate place of development possibly one ovary for the males and the other for the females The maternal organism was evidently alone responsible for the monstrosities In a second case described an viii para was delivered of triplets one small but healthy boy and two girls both with one half of the head wanting There was thus a female hemicephalus in five pregnancies of two apparently normal woman, mother of a number of healthy sons

86 **Technic of Pubiotomy**—Seeligmann urges all who have any experience with pelvis enlarging operations to send him a brief report of each case, to collect material for a decisive judgment in regard to the merits of the different technics Address Dr Ludwig Seeligmann, Hamburg, Germany The Bumm method seems simplest, but Seeligmann's experience has convinced him that his own technic is the safest The Bumm technic, he says, has already a record of 5 per cent mortality for the mothers and 5 per cent for the children, not to mention minor mishaps

89 **Ventrofixation.**—Liepmann gives an illustrated description of Bumm's method of fastening the uterus to the anterior abdominal wall Instead of fastening the round ligaments close together, the stitches are taken some distance each side of the incision, and the loop of round ligament is drawn out through a small slit in the peritoneum on each side By this modification of the original technic the traction of the stitch on each side pulls the top of the fundus of the uterus flat The fixation is to the submuscular layer of connective tissue, the silk threads being tied over the fascia The uterus retains approximately normal movability, and the position of the organ and the adnexa is approximately normal

90 **Osteomalacia and the Suprarenals**—Bossi here relates the later history of the woman with osteomalacia who improved to such a remarkable extent under suprarenal extract, as mentioned in THE JOURNAL, March 2, 1907, page 817 She was safely delivered of large twins and is now in the best of health, nursing her children He says that this is almost incredible when he reflects on the serious condition of the woman when first seen, only 23 days before the delivery, when the softened and yielding bones and intense pains suggested imminent danger of their breaking under the stress of the increasing size of the uterus The favorable outcome he ascribes exclusively to the suprarenal treatment Another patient with osteomalacia, the pelvis much deformed and yielding to the encroaching uterus in the sixth month of pregnancy, has since been under observation The woman was scarcely able to stand and could walk only when supported by two persons The slightest movement, even in bed, caused her intense pain The pelvis was so deformed from the osteomalacia that the two spinous processes of the ilium were scarcely more than an inch apart Improvement was manifest almost from the first injection of suprarenal extract, and at date of writing, 12 days later, the patient is entirely free from pain and can walk with merely the help of a cane Bossi further reports that he removed the right suprarenal gland from a gravid sheep The animal showed no special disturbances for a week, when it was noticed that it could not step about with the same freedom as before, and in a few hours this interference with the animal's movements became marked The next day the joints throughout the body showed deformity, the hip bones were evidently twisted inward and were painful on pressure It now seems to be impossible for the animal to stand up or to walk Bossi adds that he does not wish to be premature in his judgment, but that this experience certainly denotes some connection between the removal of the suprarenal and the development of the osteomalacia

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94 (XXXIII No 9 pp 329-368) *Human Cells as Parasites (Menschliche Zellen als Parasiten) H Ribbert.
95 *Pathology of the Heart Beat. (Herzschlag) M. Bönniger
96 *Prognosis of Pulmonary Tuberculosis (Lungentub) E Rumpf.
97 *New Staining Technic for differentiation of Human and Bovine Tubercle Bacilli (Neue Färbemethoden) C Spengler
98 *New Researches on Dysentery (Ruhr) Kruse.
99 Progress in Spectacles (Brillengläser) E H Oppenheimer
100 An Improvised Stand for Roentgen Tube. (Feld R Tisch nebst Stativ) Gillet
101 (No 10 pp 369 408) Treatment of Tuberculous Hip-Joint Disease (Tub Coxitis) A Hoffa
102 *Madelung's Deformity of the Hand. (Mad. sche Deformität.)* Pels Leusden
103 Two Cases of Experimental Infection of Cattle with Human Tuberculous Material (Uebertragung auf das Rind.) A. Eber Id. A Weber
104 Defective Perception of Musical Sounds (Diplakusis) A Barth
105 White Precipitate of Mercury in Salve Form (Hydrarg praecipitatum album pultiforme) H Körner
106 Recent Patents of Interest to Physicians (Erfindungen etc.) G Justi

94 **Human Cells as Parasites**—Ribbert presents new arguments to sustain his well known views in regard to the genesis of tumors He believes that tumors are the proliferation of cells which have lost their connection with the organism as a whole and live on it as parasites He asserts further that myelogenic leukemia has a similar origin, being nothing but the result of parasitic proliferation of marrow cells which have lost their connection with the bone marrow as a whole Lymphatic leukemia is the same kind of proliferation in cells of lymphatic organs living on as parasites Cancer research should aim, he says, to determine what processes of growth gradually separate the cells from the rest of the organism and start them on their parasitic existence

95 **Pathology of the Heart Rhythm**—Bönniger describes a number of cases, with tracings, which he classes in a special group for which digitalis must be avoided, as it would only aggravate the condition The principal feature of the cases is the auriculo ventricular extra systole, which is shown instructively by the Roentgen rays Other symptoms are extreme irregularity and systolic venous pulse, but the liver does not pulsate The functional disturbance may be very slight and there are no serious signs of stasis and none of the other signs of tricuspid insufficiency Systolic active pulsation of the right auricle can be seen with the fluoroscope while the unfavorable influence of digitalis is soon manifest In a typical case of this kind, a woman of 46, suffering from severe nephritis, presented an irregular pulse with systolic venous pulse, but no symptoms of tricuspid insufficiency The heart beat was regular but very slow (32), and unmistakably originated in the auriculo ventricular fibers The bradycardia became transformed later into tachycardia The venous pulse was then presystolic and very weak The importance of this simultaneous contraction of the auricle and ventricle is not so much from the standpoint of function, as this may be only slightly impaired, but from the standpoint of therapeutics, as digitalis only aggravates the irregularity and tachycardia In about 60 cases of venous pulse of which he has the tracings fully a third belong in this group The tracings closely resemble those of tricuspid insufficiency, but the conditions of the dilatation of the auricle are exactly the reverse from tricuspid insufficiency The enlargement of the auricle is not due to regurgitation of blood, but the pulsation is an active contraction of the part He reproduces a number of tracings and compares them with those of Mackenzie

96 **Prognosis of Tuberculosis of the Lungs**—Rumpf regards the predisposition or habitus as less important for the prognosis than others assume—other things being equal More important is the fact of the patient's being a poor eater or having a tendency to catarrhal affections If these tendencies can be overcome, the outlook seems to be as good for the "predisposed" as for the others The years between 16 and 30 give the largest proportion of restoration of earning capacity He percusses with the patient breathing through the mouth and bids him cough while examining each part of the area separately The character of the râles is particularly important, and whether they are diffuse or limited to a circumscribed area In his experience, râles vanished in 308 patients under treatment, and 89 6 per cent of these retained their earning faculty into the fourth year afterward In 356 others, râles could still be distinguished, but they were comparatively slight, and the earning capacity was retained into the fourth year in 89 6 per cent, while in 326 others with metallic râles on dismissal only 12 9 per cent retained their earning capacity into the fourth year, and 75 8 per cent had died When the pulse is persistently fast, and especially when also small, the prognosis should be guarded as also in cases with unstable pulse and temperature, fluctuating after physical or emotional stress There is hope that the temperature may return permanently to normal so long as the weight increases or even remains stationary Climatic factors have been shown to be less important than formerly assumed by the results published from sanatoria in northern countries, Holland Denmark and elsewhere which compare favorably with those from the most famous sanatoria, summer or winter In no other affection does the prognosis depend so much on the character of the patient and his cooperation as in tuberculosis A much better outcome can be counted on in a sanatorium than when the patient remains in his usual environment, and Rumpf even goes farther than this and separates the sexes, receiving in his pay pavilion only women patients He has been much pleased with the improvement that has followed this discrimination, and thinks that it has materially bettered the prognosis for his patients

97 **Differentiating Staining Technic for Tubercle Bacilli**—Spengler has found both human and bovine tubercle bacilli in 60 per cent of all his phthisical patients When this symbiosis is observed the tuberculosis seems to run a more chronic course, while infection with either of the species alone is of a more rapid, progressive type, and such patients nearly always have more or less fever In order to differentiate the bacilli more readily he has devised three new staining technics which he describes as adapted for practical clinical use as well as for the bacteriologist With the first the "Hüllenmethode," the bovine tubercle bacillus shows up gigantic besides the human tubercle bacillus, with other differences The second technic, the "Pikrinmethode" shows and differentiates the bacilli well even when their envelopes have been partly destroyed The third technic, the "Farblichtmethoden," has particular advantages for all the acid proof bacilli These technics succeed, he asserts, when all others fail

98 **New Researches on Dysentery**—Kruse brings out among other points that hemorrhagic and diphtheric catarrh of the large intestine can occur solely from toxic influences Certain conditions may favor the development of virulence in ordinary saprophytes and autoinfection can then result as in pneumonia The germs thus rendered virulent may infect other individuals and induce typical dysentery in them Jensen was able to induce dysentery in new born calves by feeding them with boiled milk or giving a small amount of creolin or pyoktanin The findings in the resulting dysentery were exactly the same as in dysentery under natural conditions Kruse emphasizes the fact that autoinfection and transmissibility are thus not incompatible He relates extensive studies on immunization and announces favorable results with an antidysentery serum which unites bactericidal opsonic and antitoxic properties

100 **New Patents**—An illustration is given of a little device to put on the finger which automatically holds and compresses the stomach tube so that it can be readily inserted with the finger Another illustration shows a rest cure shelter that always turns its back to the wind The rear wall of the little garden house is made of glass to admit the sunshine while keeping out the wind The whole is built on a kind of turntable and is connected with a large weather vane As the weather vane shifts with a change in the wind the garden house turns with it always presenting its solid rear wall to the wind

Therapie der Gegenwart, Berlin

107 (XLVII No 12 pp 520 576) *Anomalies in Thorax Favoring Healing of Tuberculous Lesions (Disposition bei der Lungentub) M Westenhoeffer
108 *Principles for Treatment of Appendicitis During Pregnancy (Soll man vor der App Op die Schwangerschaft beendigen oder nicht?) O O Fellner
109 Present Status of Treatment of Pulmonary Phthisis with Induced Pneumothorax (Lungenphthise und künstlicher Pneumothorax) F Klemperer
110 Treatment of Nervous Children in Sanatorium Schools (Schul Sanatorien) C Flatau
111 *Neurasthenia as Symptom of Latent Tuberculosi (Neurasthenie und latente Tub.) Weinberg

107 **Anomalies in the Thorax Favoring Healing of Tuberculous Lesions in the Lungs.**—Westenhoeffer reports the post mortem findings in two cases of pulmonary tuberculosis in which the lesions had been arrested and were retrogressing under the influence of compression of the lung from complicating propneumothorax in one case and under the influence of passive hyperemia resulting from a valvular affection in the other The conditions in the first case resembled those artificially produced by pneumoth[illegible] [illegible] ans of curing a tuberculous pulmonary [illegible] case

the conditions resembled those induced by Bier's technic of induced hyperemia. In both cases the spontaneous tendency toward healing occurred as the result of resting the parts, just as a tuberculous affection of the kidneys is benefited by change to a dry, hot climate where the skin perspires so freely that the kidneys are relieved of a large part of their work and are able to heal during this comparative rest. Comparing the two methods of artificial pneumothorax and artificial passive hyperemia, he says that the former accomplishes its purpose of causing the collapse of the lung much more effectually than any other technic yet tried. The valvular affection in his second case had existed for six years, and yet the lesion had not retrogressed to such an extent as in the other case in which the primary lesion had been much more extensive. He concludes from these findings that passive hyperemia is not able to check effectually the development of tuberculous lesions if other unfavorable factors work against it. This assumption is confirmed by a third case in which a primary tuberculous affection developed in the peritoneum notwithstanding existing cirrhosis of the liver. A healthy peritoneum has great resisting powers, but when injured it yields before the mildest invasion. The congestion in the region, resulting from the liver affection, evidently afforded a predisposition to tuberculosis in this case. This was manifest also in another case in which the functions of one lung were impeded by adhesions, the tuberculous lesions in this part being much more severe than in the free parts of the lung. In conclusion, Westenhoeffer declares that hindrance in the performance of its function favors the development of a tuberculous affection in an organ, while complete suspension of function favors a cure.

108 **Appendicitis During Pregnancy.**—Fellner advocates operating in appendicitis entirely regardless of an existing pregnancy. If the child is dead or if there are appreciable signs of labor, the laparotomy should be preceded by the evacuation of the uterus. If the uterine peritoneum is sound, vaginal Cesarean section may be ventured, otherwise delivery induced by another route is preferable.

111 **Neurasthenia as Sign of Latent Tuberculosis.**—Weinberg states that it has been a frequent experience in his practice to find that patients exhibiting symptoms of neurasthenia, but without an apparent trace of tuberculosis, developed tuberculosis after a few years. He warns that patients with neurasthenia should be regarded as suspicious of tuberculosis, especially if the complexion is particularly pink and white, or grayish or yellowish or if the patients are very thin. Systematic recording of the temperature or the tuberculin test may reveal the tuberculosis underlying the supposed idiopathic neurasthenia in many cases.

Nordiskt medicinskt Arkiv, Stockholm.

Last indexed XLVII, page 186.

112 (XXXIX, Internal Medicine, No. 3.) *Autopsies at Copenhagen. (Sektionen am Kommunehospital.) V. Scheel.

113 *Comparative Study of Local Action of Anesthetics. (Lokalwirkung von Cocain und Stovain.) C. G. Santesson.

112 **Autopsies at Copenhagen Hospital and Thymic Death.**—A number of the more interesting cases are illustrated, among them one of intense lymphosarcomatosis of the stomach and adjoining intestine and another of senile atrophy of the liver with torsion of the gall bladder. A typical specimen of "icing liver" is also shown. In three instances the death of a child could not be explained except by the hyperplasia of the thymus. One was a healthy boy of nearly 11 found dead in bed in the morning with no signs of a struggle, apparently sleeping quietly. The thymus measured 2x7x8 cm. and weighed 40 gm. Scheel paid particular attention to the size of the thymus in other cadavers to establish the normal size for the various decades in life. In 27 children under six months the thymus ranged in weight from 1.2 to 19 gm., in 34 children between six months to a year old the thymus ranged from 1.75 to 21 gm., in 17 between 5 and 10 the thymus weighed from 1.5 to 23.3 gm., in 11 between 10 and 20 from 3 to 21 gm. In 64 persons between 20 and 60 the thymus weighed from 1.6 to 46.8 gm., the average being about 11 gm., and in 35 persons between 60 and 80, the thymus ranged in weight from 1.1 to 38.4 gm., with an average of about 11 gm. The thymus may induce death by compression on the trachea or on the heart and main arteries, and also by paralysis of the heart by toxic or reflex action. In examining 36 cadavers of persons who had died of delirium tremens, fatty degeneration of the liver and chronic leptomeningitis were the only findings noted with any constancy. Arteriosclerosis was less prevalent than in corresponding groups of non-alcoholics of the same age.

113 **Local Action of Anesthetics.**—Santesson's experiments on frogs and rabbits have demonstrated to his satisfaction that cocain—and still more, stovain—affect the neurilemma and change it in a specific manner. The myelin and also the neurokeratin are more or less altered, and in some of the nerve fibers were found altogether destroyed. His experiments were made with scraps of nerve just taken from the living animal. His findings indicate a special affinity between the poisons and certain elements of the neurilemma. This affinity favors the penetration of the drug through the protecting sheath to the conducting elements of the nerve.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interest of our readers.

A System of Medicine by Many Writers. Edited by Thomas Clifford Allbutt, M.A., M.D., LL.D., Regius Professor of Physic in the University of Cambridge and Humphry Davy Rolleston, M.A., M.D., F.R.C.P., Physician to St. George's Hospital. Volume II. Part I. Infective Diseases and Intoxications. Part II. Tropical Diseases and Animal Parasites. Cloth. Pp. About 1,050 each. Price $5.00 per volume. New York and London: Macmillan Co. 1906.

Roentgen Rays in Medical Work. By David Walsh, M.D., Ed., Senior Physician, Western Skin Hospital, London, W. Part I. The Electrical Apparatus by H. L. Jones, M.D., Cantab., F.R.C.P., Lond., Medical Officer in Charge of Electrical Department of St. Bartholomew's Hospital. Part II. Medical and Surgical by the Author. Fourth Edition. Cloth. Pp. 433. Price $4.00 net. New York: William Wood & Co., 1907.

Manual of Obstetrics. By A. F. A. King, A.M., M.D., LL.D., Professor of Obstetrics in the Medical Department of the George Washington University, Washington. Tenth Edition, Revised and Enlarged. With 301 Illustrations in Text and Three Plates. Cloth. Pp. 688. Price $2.75 net. Philadelphia and New York: Lea Bros. & Co., 1907.

Essentials of Chemistry and Toxicology for the Use of Students in Medicine. By R. A. Witthaus, A.M., M.D., Professor of Physics, Chemistry and Toxicology in Cornell University. Thirteenth Edition. Revised by R. J. D. Scott, M.A., B.C.L., M.D. Cloth. Pp. 306. Price $1.00. New York: William Wood & Co., 1907.

Surgical Diseases of the Chest. By Carl Beck, M.D., Professor of Surgery in the New York Postgraduate Medical School and Hospital. With 16 colored and 162 Other Illustrations. Cloth. Pp. 368. Price $5.00 net. Philadelphia: P. Blakiston's Son & Co., 1907.

Diagnostics of Diseases of Children. By Le Grand Kerr, M.D., Professor of Diseases of Children in the Brooklyn Postgraduate Medical School. Fully Illustrated. Cloth. Pp. 542. Price $5.00 net. Philadelphia and London: W. B. Saunders Company, 1907.

Treatment of Disease. A Manual of Practical Medicine. By Reynold Webb Wilcox, M.A., M.D., LL.D., Professor of Medicine at the New York Postgraduate Medical School and Hospital. Cloth. Pp. 911. Price $6.00. Philadelphia: P. Blakiston's Son & Co.

Transactions of the Western Surgical and Gynecological Association. Sixteenth Annual Meeting, held at Salt Lake City, Aug. 30, 1906. Cloth. Pp. 324. Minneapolis: Press of the *Journal-Lancet*, 1907.

Annual Report of Vassar Brothers Hospital, Poughkeepsie, N. Y. Founded by Matthew Vassar, Jr., and J. G. Vassar. Incorporated June 1882. Paper. Pp. 24. Poughkeepsie: A. V. Haight Co., 1907.

Tenth Annual Report of the Trustees of the Massachusetts State Sanatorium at Rutland, Nov. 30, 1906. Paper. Pp. 29. Boston: Wright & Potter Printing Co., 1907.

Zwillingsschwangerschaft mit heterotopem Sitz der Früchte. Von Dr. von Neugebauer, Warsaw. Paper. Pp. 165. Price 6 mk. Leipsic: Verlag von Dr. Werner Klinkhardt.

Ninetieth Report of the State Board of Health of New Hampshire. For the Two Years Ending Nov. 1, 1906. Cloth. Pp. 319. Concord: Rumford Printing Co.

Eighth Biennial Report of Colorado State Board of Health, Jan. 1, 1905, to Dec. 31, 1906. Cloth. Pp. 115. Denver: Smith-Brooks Press, 1906.

Transactions of the American Climatological Association for the Year 1906. Volume xxii. Cloth. Pp. 303. Philadelphia.

Annual Report of St. Joseph's German Hospital of Baltimore for the Year 1906. Paper. Pp. 33.

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Original Articles

THE DIGESTION OF THE PROTEIDS OF COW'S MILK IN INFANCY

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CHICAGO

The proteids in cow's milk give rise to no digestive or nutritive disturbances in the feeding of young infants If the foregoing statement be a fact, and I am convinced that it is, then the theories and practices that now hold the American profession with regard to the artificial feeding of infants must be radically altered. For years the idea of proteid indigestibility has existed, based principally on some crude test-tube experiments and the misappreciation of certain appearances of the baby's stools, and this error has lived because none challenged the hypothesis, but everybody accepted the casein indigestion as an easy explanation of the difficult digestion of cow's milk during infancy However, such a mass of incontrovertible evidence has been presented by Escherich, Heubner and Rubner, Budan, Finkelstein and more especially by Czerny and Keller, that one must now admit that such a thing as the proteid indigestion of cow's milk is untenable

INDIGESTIBILITY OF PROTEIDS NOT TENABLE

The theories of the difficult digestion of cow's proteid-were based on the following hypotheses, as stated by Czerny

Conclusions drawn from the firm coagulum that forms in a test-tube when rennet is added to cow's milk, and the greater amount of proteid in cow's milk than in human milk, the presence of curds in the stools, mechanical irritation by hard clots, causing colic, etc , the "foreign" albumin of cow's milk, a toxic irritant, and the putrefaction of proteid remnants

When rennet is added to cow's milk in a test-tube a firm clot forms only when the test-tube is allowed to stand without agitation If the tube be sealed and slowly inverted so as to imitate, even though crudely, the churning movements of the stomach, a fine flocculent precipitate is formed and if one removes cow's milk from a child's stomach with a stomach tube a similar flocculent precipitate is obtained If any conclusion can be drawn from the behavior of cow's milk with rennet, it is such as would not speak for its indigestibility The so-called curds in the bowel movement of infants, by which are meant the common whitish, yellowish-white, or yellowish lumps, are not proteid material, but are fats or fatty soaps, rarely are they inspissated mucus or clumps of bacteria Chemical examination of these masses will reveal their nature and clinically they can be lessened or caused to disappear from the stools without altering the proteid contents by diminishing or removing the fat from the milk food In hundreds of experiments in which I have given an undiluted fat-free milk to babies, at times giving more than a quart in 24 hours, never, after careful examination, have I seen curds in the stools

For such experiments, distinction must be made between skimmed milk and fat-free milk. Fat-free milk, which can be obtained by the centrifugal separation of milk, contains less than 0 5 per cent. of fat, and such a small amount of fat can be disregarded When milk is skimmed by allowing it to stand in a suitable vessel until the cream rises and is skimmed away, or even siphoning the lower milk, the amount of fat in such milk is often more than 1 per cent., and such skimmed milk may occasion small, whitish, pin-point masses to appear in the stool when administered to a susceptible infant

If curds or clots are not formed by the proteids, then no mechanical injury can be produced by the proteids and the symptom of colic has been absent from the babies fed on proteid-rich, fat-free milk.

Biedert's hypothesis of "injurious food remnants," by which he taught that the casein masses precipitated in the stomach were retained in the gastrointestinal tract where they underwent putrefactive decomposition, and irritated the alimentary mucosa and might precipitate an attack of gastroenterocolitis, Biedert's hypothesis can be refuted by experiments with fat-free milk It is found on experiment that the proteid content of milk resists bacterial decomposition for a long time In the stools of many infants fed on proteid-rich, fat-free milk I have never been able to discover the least putridity In three cases of ulcerative ilocolitis I have fed sterilized, undiluted, fat-free milk and have seen the bowel movements quickly change from lumpy, mucopurulent, bloody, putrid evacuations to smooth, salve-like, yellowish-brown movements devoid of offensive odor

The hypothesis of Hamberger concerning *art-eigenes* and *art-fremdes* albumin has only a theoretic interest The harmlessness of the proteid can be demonstrated clinically by its administration to any infant. I have given fat-free, proteid-rich milk to a large number of babies, over 200 in hospital and in private practice, to the premature new-born, to the infants in three cases of ulcerative ilocolitis and in three cases of hereditary lues, to many atrophic babies, etc, and the result in each case was the same, so that one can state with the assurance of a mathematical demonstration what must follow every time the experiment is made.

In such an experiment as the following give a baby weighing let us say seven pounds, from three to four ounces of sterilized, fat-free, undiluted cow's milk every four hours, or five feedings in the 24 hours The child will present no symptoms of distress, no meteorism, no vomiting of clots, no belching of gas, and its bowel movements will be smooth, soft, salve-like, brownish-yellow, homogenous and without offensive odor The color of the movement may vary from a very light yellow to brownish-yellow, but with this [illegible] color every other condition will [illegible]

described I have made such experiments innumerable times, always with like results The following cases are reported in more or less detail, illustrating the ease of proteid digestion.

CASE REPORTS

Case 1 *Patient*—Baby A. was admitted to Wesley Hospital when three days old with its mother, who had a severe puerperal infection. The infant had a temperature of 100 F On admission it weighed 5 pounds 12 ounces Physical examination was negative.

Treatment—The infant was given one half grain of calomel in divided doses and weak barley water for two days The temperature was then normal and it was given a small amount of milk, which was slowly increased to three ounces in 24 hours There were free green curdy bowel movements and the milk was discontinued on the ninth day and one ounce of cream given with whey and barley The food was continued for three days The stools were increased in number, the curds became more numerous and the weight diminished. The food was changed, and through an error 20 ounces of whole milk was given for one day, when eight very curdy green bowel movements followed. The following day fat-free milk was given and the character of the stools changed immediately They were soft and yellowish, with no curds Two days later a number of fine curds were noted in the stool and it was learned that a siphoned milk, which was not fat free, had been used that day The babe continued to thrive on the diet as shown in the chart. On September 15 one ounce of whole milk was added to the mixture and on the appearance of small curds it was withdrawn A week later four ounces of whole milk were added to the food Next the stools became hard and marble like and whole milk was again withdrawn. Six days after this one ounce of cream was added, after this the bowel movement again became dry and firm and the tongue was coated, then the cream was removed On the forty sixth day the child was taken home by the mother in very evident good health, good color, active, eager for its food, no colic, gaining in weight and with clear, salve like yellowish brown stools

Date		September 24	26	29	October 2	5	6	8	9	10	12	15	17	24	26	29	30	November 3	6	14
Cream	Ozs				1												1			
Milk	Ozs		1	3		20						1		4						
Fat-free milk	Ozs						10	8	10	12		17	21	18	21	21	19	21	21	
Whey	Ozs.				8															
Barley water	Ozs	18	9	8	5															
Water	Ozs		10	9	6		10	8	6	4	6	6		4			1		3	
Milk sugar	Ozs	½																		
Cane sugar	Ozs		1	1	1		¾	¾	¾	¾	¾	¾	¾	¾	¾	1	1	¾	1	
No of feedings		12	10	10	10	10	10	8	8	8	8	8	7	7	7	7	7	7	6	
Amount in ounces		1½	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	
Fats		0	0 2	0 6	0 8	4	0	0	0	0	0	0 1	0	8	0	0	8	0	0	
Proteids		0	0 2	0 6	0 6	4	2	2	2 5	3	3	3	4	3	4	4	4	4	3 5	
Carbohydrates		3 7	5 6	6 0	7 5	6	4 7	5	5	6	5 2	6 5	8	7 3	8	9	9	8	8	
Total calories,		114	148	187	239	485	145	133	151	169	231	288	300	312	300	330	384	300	320	
Energy quotient		25	67	65	85	179	51	47	53	60	82	99	100	100	99	103	120	96	103	
No of B movements		2	4	2	4	6	8	3	2	5	1	1	2	1	2	2	4	3	1	2
Weight in pounds*		5 12	5 14	6.4	6.0	5 15	6			6 1	6	6 4	6 6		6.11		6 14	6 15	7	7 9

Weight is indicated in pounds in ordinary figures, ounces in superior figures.

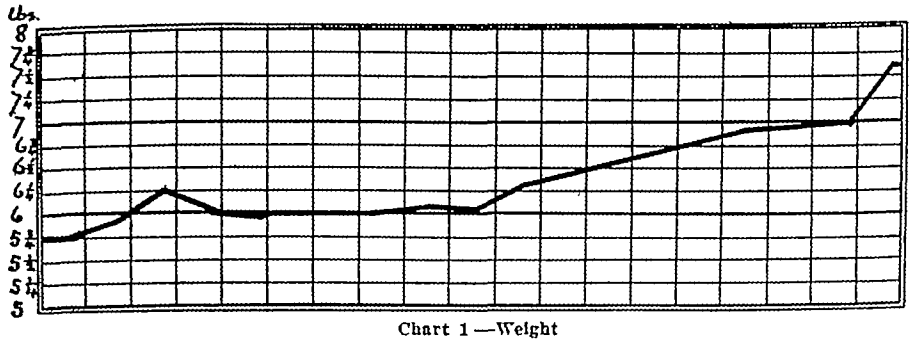

Chart 1—Weight

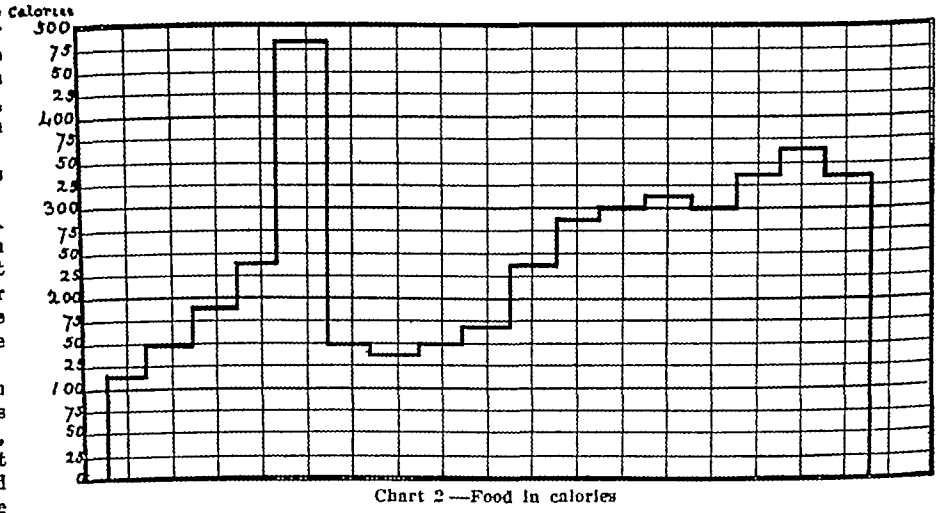

Chart 2—Food in calories

Charts 1 and 2 tabulate the food and progress in this case

Case 2 *Patient*—H., male, aged 3 years, was admitted to Wesley Hospital.

History—There are four children in the family, all well, the father and mother are in good health. The child was breast-fed and had no serious illness until three weeks before admission to hospital, when the present sickness began suddenly with vomiting, high fever and diarrhea The fever and diarrhea had continued up to the time of admission The bowel movements were very frequent, from 10 to 20 a day, were very offensive, liquid and contained blood, mucus and pus

Examination.—The child was in a condition of extreme emaciation and prostration when admitted to the hospital. He weighed 20 pounds Lying on his back in great apathy, and with deeply sunken eyes, he looked more like a corpse than a living child He was very dull and exhibited resistance only when disturbed for examination, feeding or changing his diapers The cervical axillary and inguinal lymph glands were slightly enlarged The skin was dry and pale, and the tongue was very red and dry, the teeth were covered with dry secretion and the angle of the mouth was fissured The heart beat was rapid and the muscle tone muffled, there were no other abnormal findings in the chest The abdomen was sunken, but without muscular rigidity or tenderness The liver could be felt an inch below the costal arch, the spleen was not palpable Blood examination revealed 25,000 leucocytes There was no Widal reaction The bowel movements were thin, numerous, greenish and slimy, very small in amount, consisting of curds and débris and masses of pus, and were blood streaked The odor was very offensive.

Treatment—Details are shown in Chart 2 The child was placed on stimulation, and fat free milk and arrowroot were ordered every four hours He took his nourishment only in small amounts and that after persuasion. The following day the stools were examined and found to contain many colon bacili and cocci, pus, and starch granules The child vomited several times and rejected his food. On the third day he was fed through a nasal catheter, four ounces of sterilized fat free milk were given six times in the 24 hours From this time on there was no vomiting and the character of the bowel movements changed There were never any curds in the stools while he was taking the fat free milk even, as seen in the chart, when he was having more than a quart a day The soft yellow salve-like stools soon replaced the early stools and putridity was absent On the fifth day in the hospital his temperature became 102+ F The following morning the explanation of the rise in temperature was found in a red, swollen and tender condition of the right parotid gland, with this *exception the improvement* was uninterrupted The additions that were made to the diet are shown in Chart 3 and illustrate the value of determining the energy quotient, in order properly to nourish the child

SUMMARY

A child entering the hospital in a very grave state with a severe ulcerating enterocolitis was fed on a fat-free, proteid-rich diet, without sign of distress or indigestion of this food This food seemed to have a decidedly beneficial and therapeutic effect in allaying the inflamed bowel and lessening the putridity of the bowel content

A 10-months-old child, three weeks ago, was taken suddenly ill with ileocolitis For two weeks the conditions were much like those described in the preceding case The child was put on fat-free, proteid-rich milk, and is now taking 8 ounces five times a day, or 40 ounces in the 24 hours The movement was soft, absolutely free from any sign of curd, yellowish in color, salve-like in consistency and inoffensive in odor The therapeutic result is similar to that in the other cases of ulcerative ileocolitis

An atrophic child, now in Wesley Hospital, aged 5 months and weighing a half-pound less than he did at birth, that is, 7 pounds, he is taking as food 30 ounces of fat-free, sterilized milk a day He was admitted to the hospital because his mother was worn out in her efforts to find a food for the child The baby cried all the time, said the mother On a fat-free milk, given every four hours, he has gained seven ounces in ten days, has no symptoms of colic and is much more contented There are never any curds in the stools

PERCENTAGE SCHEDULES FAULTY

The former ideas of the nutritive and digestive disturbance that arose in the artificial feeding of infants on cow's milk were based on the hypothesis that the proteid content of cow's milk was difficult to digest and, without demonstrating this, every means were taken to overcome the assumed difficulty The milk was diluted until the proteids were reduced almost to the vanishing point The proteids were split by the addition of rennet, and whey containing the "soluble" albumin with cream additions came into popular use Alkalies, such as bicarbonate of soda or of potash or lime water, were used to diminish the curd coagulum Cereal decoctions were said to have a similar action The predigestion of the casein by pepsin or pancreatin was likewise prescribed, and of late we are told that citrate of soda makes proteid digestion easier

Ludwig F Meyer says that the difference in the behavior of human and of cow's milk should no longer be sought in the different caseins and their lighter or harder digestibility The principal difference in the two milks, he says, consists much more in the whey, especially with regard to the contained ferments and inorganic salts

The fact is we have no single symptom or group of symptoms from which we may conclude that any injury to the infant occurs from the albuminoid material in cow's milk, and with the demonstration of this fact all the methods advocated to aid in the digestion of the proteid are without foundation, are useless and may be harmful It is not to be understood that this article advocates the feeding of babies on a fat-free or skim-milk diet The normal baby demands a proportion of fat in its food, and the amount is a problem for individual determination As mentioned in Dr Brennemann's paper, the most frequent source of overfeeding is an excessive amount of fat, and the most dangerous foods are the cream mixtures The cream mixtures give

Entero-colitis

Date		October 15	16	17	18	19	20	21	22	23	24	25	29	27	28	29	30	November 1	2	3	4	5	6	10	12	16	30
Whole milk	Ozs																5	5	5	5	5	5	5	5	5	10	10
Fat-free milk	Ozs	4	4	20	30	30	30	30	30	30	30	30	30	30	30	30	35	35	35	35	35	35	35	35	35	40	40
Arrowroot water	Ozs	8	8																								
Cane sugar	Ozs																½	½	½	½	½	½	½	½	½	½	½
Wheat flour	Ozs														2	2	2	2	2	2	2	2	2	2	2	1	1
Quantity	Ozs				6	6	6	6	6	6	6	6	6	6	6	6	8	8	8	8	8	8	8	8	8	10	10
No of Feedings					5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
No of B movements		1	1	1	1	8	8	8	5	7	4	9	7	2	4	7	5	3	2	5	4	2	2	2	2	3	
Blood		B	B	B		B	B																				
Pus		P	P	P	P	P	P	P	P	P		P															
Mucus		M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M										
Vomiting		V	V	V																							
Total calories		64	[200	300—											540		655									780	790
Energy quotient		7	22	33—]											60		72									81	63
Weight	Lbs	20	20		19 15 —]								19 15		19 15						20 4		20 10		21 2	21 5	22

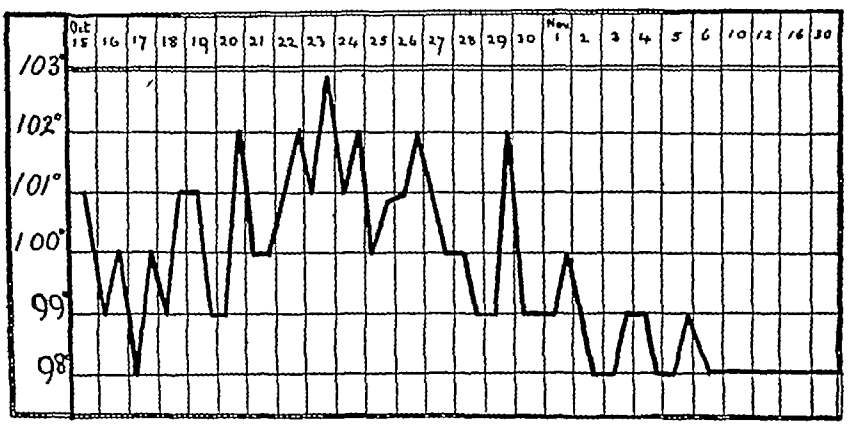

Chart 3 —Temperature in Case 2.

too much fat and too little proteid If, as the champions of the percentage method of feeding tell us, "the modification of the proteid is the most important change necessary in cow's milk, for it is the proteid which gives most of the trouble to the infant's digestion," then it must follow, after the demonstration of the innocuousness of cow's proteid, that the percentage method is built on an erroneous idea Moreover, since the published schedules on the percentage basis exhibit a high degree of overfeeding and do not accurately tell the amount of food that a child is having, there is little, if any, reason at present for the existence of the method.

THE VALUE OF WHOLE MILK MIXTURES

It may be asked what can be offered in its place, and I should answer the feeding of normal infants on whole milk mixtures, beginning with dilution not to exceed one part of milk to two parts of water and lessening the dilution until whole milk is reached, sometimes from six months to a year, and such whole milk should contain not to exceed from 2 to 3 per cent. of fat rather than 4 per cent., as is present in certified milk.

The baby from the first week should not be fed oftener than every four hours during the day and twice at night, and the amount at each feeding should be enough to satisfy its appetite Few babies, if fed only every four hours, will take too much food A check against overfeeding should be applied, however, in every child by estimating the caloric value of the food taken during the 24 hours The caloric value of the infant's food is a matter of easy calculation

For a further discussion of the caloric check against overfeeding I refer to the paper by Dr Brenneman on that subject. It is understood, of course, that the food of the infant should be properly balanced and contain fat, carbohydrates and proteid in due proportion The food elements, fat, proteid and carbohydrates, are not isodynamic in the sense that metabolism can be properly and continuously provided for on a diet made up entirely of any one or two of these elements. But what this due proportion should be is a matter for study in the individual case and not a part of this paper, except in so far as it points out the harmlessness of cow's milk proteid, and leaves for consideration the importance of a proteid rich diet.

CONCLUSIONS

1 There is no evidence that the proteid of cow's milk causes any digestive disturbance in the infant.

2 All experiments prove that cow's proteid is easy to digest and resists putrefaction

3 The methods mentioned above as aids in the digestion of the proteids are without reason

4 In sterile, fat-free milk we possess an unequaled therapeutic agent in the treatment of the nutritive disorders of infancy

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Ten Laparotomies for Adhesive Peritonitis with Final Cure —Greiffenhagen relates in the *St. Petersb med Wochenschr* for October 13 the details of a case of chronic peritonitis with recurring lesions in a housemaid of 35 a primipara, finally cured after nephropexy had been done four times and laparotomy ten The woman had had varioloid and scarlet fever as a child, but otherwise nothing could be discovered to account for the adhesive peritonitis. The appendix, adnexa and other organs were sound. The numerous operations were undertaken principally to relieve the intense recurring pains, without much hope of a permanent cure, but the patient has been in good health for eight years since the last operation. The first symptoms to attract attention were those from wandering kidney

GLEANINGS FROM FOUR YEARS' EXPERIENCE IN THE CORRELATION OF CLINICAL AND RADIO-DIAGNOSTIC FINDINGS

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During the past four years I have consistently employed as a diagnostic aid the *x*-ray in the field of internal medicine, and this in hospital, private and consultation work. The method followed was routined, thus A thorough clinical examination was first made and a tentative diagnosis formed, then a radiogram was taken and, if necessary, the fluoroscope used, if the clinical and radiographic evidences did not tally, the patients were re-examined, special attention being directed to the discrepancy Thus the clinical and radiographic pictures were finally correlated and the previous errors noted It frequently happened that many clinicians had the opportunity of seeing the same patient and of forming tentative opinions internes, those seeking postgraduate instruction, general practitioners and hospital physicians In such event the varied errors were recorded

The first year's work served to develop sufficient skill in the use of the *x*-ray to make it of service and incidentally to demonstrate the high educational value of the method outlined since

1 Diagnostic errors could be frequently corrected while the patient was under clinical observation

2 Those who had arrived at wrong clinical conclusions could not readily cavil at the correct one when the latter was based on such correlated and partly visible work.

It seems to me that, notwithstanding the loss of the plates and detailed records in the late San Francisco fire, short reports of group cases showing the diagnostic value of such correlated work and the recording of the lessons learned, and of some of the common mistakes made by internes and those seeking postgraduate instruction, might be of service

DIAPHRAGAMATIC AFFECTIONS

CASE 1 —Middle-aged man, whom previous examination had shown to be free from organic disease.

History—An oculist had been testing his eye refraction and had used hyoscin as a pupil dilator This had upset him, had made him nervous, and that morning he found he could not empty his chest during expiration.

Examination —When he was stripped I was surprised to see that during the expiratory phase two cup-shaped hollows became evident, one at the outer border of each rectus muscle at the lower margin of the thoracic cage These hollows almost disappeared during the latter part of inspiration, to become again marked during expiration, and the more strenuous the gentleman's expiratory endeavors became, the greater became the capacity of these retractions The patient was neither dyspneic nor in pain, but was mentally annoyed. The complaint of inability to expire completely, plus the hollows in the line of the diaphragm insertion, naturally suggested some abnormality in the action of that muscle

X-ray Examination —The fluoroscopic picture was interesting The diaphragm moved up and down piston like during respiration, but instead of each half being dome-shaped, it was as though the summit of each dome had been cut off, each half presenting a striking resemblance to a table mountain This appearance was maintained during the whole respiratory phase and was evidently caused by a localized, bilateral spasm of the diaphragmatic fibers

Since during inspiration the insertion and origin of these

fibers were approximated, the clinical evidence of the spasm diminished during this phase, so that without the fluoroscope I could only have surmised the probable, with the fluoroscope I could see the actual The fact that such local spasm of this muscle can occur, is instructive and perhaps may be the cause of some of the crampy pains in its neighborhood, though this patient had no pain, and may explain the origin of some of the antero-posterior liver grooves not uncommonly found in the postmortem rooms

After an afternoon spent on the golf links this man's diaphragm acted in the normal manner Whether the hyoscin was directly responsible as the man declares, or whether it was simply a factor in producing a nervous condition, during which functional, bilateral local diaphragmatic spasm developed, I cannot say

The movements of the diaphragm serve as an index of the movements of the basal surface of the lungs, and are better studied with the fluoroscope than in any other way The edges of the lung base may move in the complemental pleural spaces without there being a corresponding diaphragm movement, and hence diaphragm movement and expansion of the lung basal edges are not necessarily synonymous The Litten phrenic wave, on the other hand, is caused by the peeling off of the diaphragm from the chest wall in its descent and serves to indicate its excursion Hence our clinical examination should include a diligent study of both these phenomena.

The most common errors in this connection noted during this work have been

1 No estimation of the lung border movement has been attempted.

2 The extent of movement of the lung basal edge has been percussed, for only at one or, at most, two spots, and the result has been assumed to answer for the whole margin, consequently the clinical search for localized adhesions or for small loculated basal effusions, was insufficient, and any deductions drawn as to their presence or absence were illogically based

3 The pulling up of the chest wall was commonly percussed as diaphragmatic movement.

4 No phrenic wave was looked for

5 If looked for, the inspiratory sucking in of the lower intercostal spaces was often mistaken for it.

6 Those who looked for and found it, often considered it unnecessary to estimate by percussion the lung border movement in a circumferential manner, even though they had only seen the phrenic wave in the axillary region

7 Palpation sensitiveness was rarely sought for

Practical clinical skill in the diagnosis of conditions in this region is difficult to acquire The fluoroscope will aid much in the interpretation and, if used correctly, in the acquisition of such clinical ability

OLD APICAL DISEASE

Case 2 —A young, well-developed woman, came to my office desiring to know the nature of a lump in her neck There was a history of chronic cold some years previously

Examination.—Inspection, palpation, percussion, and auscultation revealed nothing abnormal, except that the right supraclavicular and infraclavicular regions were not as prominent as the left.

X-ray Examination —The fluoroscope showed a pear shaped, dark, clean edged shadow almost as large as an English walnut, just under the right clavicle. The history of a cold, the slightly sunken apex, the dense shadow, indicated an old, healed and probably calcified tubercular focus The glands in the neck were considered tubercular and their removal advised, the patient being told of the old lung lesion She visited many physicians, all of whom denied that there was or had been anything wrong with the right lung She returned to tell me of my error, and it was only when she saw the dense shadow on a radiograph plate that she recognized the truth of my contention

This case forms one of a series of similar ones in which in well-developed persons a slightly shrunken apex was the clinical corollary of a marked, clean-cut radiographic shadow Such old lesions are often not noted in clinical work, since such patients present no symptoms of active lung disease

The following errors are common

1 Very little time is given to inspection and hence slight retractions are not noted.

2 The height and breadth of the lung apices are not as a routine measure percussed.

3 If differences in height and breadth be noted, they are not infrequently interpreted as errors of development.

Patients with such old lesions react to tuberculin, they occasionally get influenzal apical infiltrations. The composite picture almost invariably insures a diagnosis of active tuberculosis, even though no tubercle bacilli can be found, and, while this is satisfactory from the standpoint of treatment, a report of the cure of such cases of supposedly active tuberculosis is, of course, very misleading The radiograms themselves may aid in the deception, but the continuous absence of the tubercle bacilli, the presence of bacillus of influenza, and the much darker, old shadow in the radiogram will, when correlated, serve to lead us to a correct diagnosis

Of the relative value of pure clinical and radiographic work in the diagnosis of incipient apical tuberculosis I will say nothing, inasmuch as these methods are no more rival measures than are the clinical examinations of an acute abdominal lesion and the estimation of that patient's leucocyte count, but are handmaidens to each other This case brings out the value of the radiogram from the standpoint of the relationship between the physician and the patient. The doubters become convinced when a radiogram of the normal and a radiogram of their own diseased lung or enlarged heart is shown them and become much more amenable to treatment and ready to diligently carry out the physician's instructions

CENTRAL PNEUMONIC PATCHES

Case 3 —Patient, male, lately come to San Francisco from China, was seen in consultation He complained of daily chills and excessive sweating

Examination —Patient looked septic Liver and spleen much enlarged Leucocytes 12,000 The heart and lungs seemed normal, the abdomen was not rigid, the liver was not tender, no malarial parasites could be found in the blood, and no amebæ in the stools, the urine was normal He had been taking quinin with no apparent effect. We were inclined to suspect the presence of a deep seated liver abscess, but before deciding, we determined to make a fluoroscopic examination

X ray Examination —With the fluoroscope we saw, centrally placed in the left lower lobe, just above the diaphragm, a dense shadow about the size of a tangerine orange At deep inspiration the diaphragm descended and allowed the light to penetrate between it and the mass

Re examination —Carefully re-examining the patient and paying particular attention to the left posterior lung base, one could detect over the site of this shadow, an increased resistance on percussing with the passive finger resting firmly on the chest, and over this area the vocal fremitus was diminished and the breath sounds faint These physical signs alone would not have justified a diagnosis, and at best would have suggested waiting to determine if they should change The correlated picture, however, made the diagnosis of a central patch of pneumonia, with a blocking of its feeding bronchus, occurring in a man who previously had a large liver and spleen (probably hypertrophic stage of atrophic cirrhosis) extremely probable and such the after history proved the case to be

Case 4 —A young Englishman, who had come from China was seen in consultation with Dr Brunn He had been having chills and fever, and marked sweating, for which he had been unsuccessfully treated with quinin.

Examination—No parasites were found in his blood, his leucocyte count was 12,000, no amebæ present in the stools Liver and spleen both enlarged The tentative diagnosis here also had been liver abscess Examination of the lungs disclosed an area, just below the left scapular angle, where there was an increased percussion resistance, here a few râles could be heard and the expiration was slightly bronchial A diagnosis of a central patch of pneumonia was made and its presence afterward confirmed by the fluoroscope The malarial parasites were later found so that we had to do with a case of malaria, which a central patch of pneumonia had complicated

These two cases were interesting from several standpoints In the first place, they show us we must not jump at a diagnosis of liver abscess in patients who have come from districts in which such abscesses are not uncommon, even though the past history, the symptoms and signs (chills, fever, leucocytosis, big liver) and the apparent absence of other causes are suggestive The first case illustrated the value of the ray in the diagnosis of patches of central pnuemonia which present few signs, and such silent pneumonic areas are not rare particularly in children Further, it convinced me that I was better able to recognize such deep-seated infiltration by the sense of resistance than by the percussion note This has been repeatedly impressed on me in this work, and in the clinics, where I try to get the men to test their results obtained from percussion sound and percussion resistance, I find they come to realize the highest value of the latter The same applies to the determination of the heart borders and of superficial and deep dulnesses generally Personally I know that if I wish to obtain percussion results corresponding with *x*-ray findings I have to go systematically over the chest, with light percussion, with moderately heavy percussion, with percussion resistance, the passive finger resting lightly on the chest wall, and with percussion resistance, the passive finger resting firmly on the chest wall

I believe that in neglecting to emphasize the value of percussion resistance many teachers and authors err Perhaps some physicians are so gifted in tone perception, etc, as to render other methods superfluous, but in those whom I have tested the pressure sense has become more reliable

PERIBRONCHIAL GLANDULAR ENLARGEMENTS

CASE 5—A young woman, seen in consultation with Dr Wilson Shiels, had lost much weight. Dr Shiels was unable to fatten her by any method whatever No other symptoms were present except a slight cough

Examination—No cause was revealed for this loss of weight A few glands could be felt in the iliac fossæ, and there was, perhaps, a slight percussion palpation resistance over each lung root The other signs, supposedly characteristic of the presence of peribronchial glands, were absent Nevertheless the probable diagnosis seemed to me peribronchial tuberculosis

X ray Examination—We took a plate in order to determine this and found a good deal of infiltration around each lung root At one spot a tubercular area had become calcified the rest of the lung was entirely clear and the diaphragm at its normal level

This case is a type of several I have seen in which clinically there have not been sufficient signs to render the diagnosis of peribronchial glandular tuberculosis more than probable On the other hand, indications were absent of involvement of the more readily examinable structures in a person who looks tubercular and behaves clinically as if tubercular In many such patients (both adults and children) I have by means of the radiogram demonstrated the presence of peribronchial glandular enlargement One can not from one plate conclude that the process is still an active one To determine this another plate taken under the same conditions must show an increase in the area of infiltration, or combined with the picture we must have the clinical indications of tuberculosis, such as evening rise of temperature, cough and, of course, at some time or other tubercle bacilli in the sputum

Occasionally one sees patients in whom quite an extension has taken place from the root into the lung toward the tip of the shoulder, this central infiltration exhibiting exceedingly few indications of its presence, but the radiogram readily reveals the extensive involvement. We must, however, remember that in tuberculosis of the body, wherever situated, peribronchial tuberculosis, old or recent, is apt to be found postmortem and such, a good radiogram, can show antemortem Further, in patients with non-tubercular pulmonary inflammations, abdominal carcinoma, esophageal carcinoma, etc, peribronchial glandular enlargement may occur, and I have seen several cases in which the shadows cast by such glands were clearly apparent in radiograms of patients suffering from these diseases, and this in the absence of any evident correlated physical signs In such instances the possibility that they represent old tubercular peribronchial glands must always be borne in mind and the question determined by the whole clinical picture

In two examples—one of lung carcinoma and one of bronchial carcinoma—the physical signs and the presence of multiple enlarged supraclavicular glands rendered the diagnosis easy, but the pictures obtained were so characteristic as to leave no doubt of the value of the plate in doubtful cases

LOCULATED EFFUSIONS—INTERLOBAR EMPYEMA

CASE 6—A man, admitted into St Luke's Hospital in Dr Moffit's service, complaining of pain in the right hypochondriac region The pulse was hurried and a moderate degree of fever was present The interne diagnosed cholecystitis Investigation showed that we had to do with one of those cases of thoracic disease which simulate an intra abdominal lesion

Examination—Chest examination demonstrated posteriorly on the right side in the line of the great fissure a dull area, over which there were an increased superficial percussion resistance and a diminution of breath sounds This area increased from day to day, finally becoming oval in shape In increasing it evidently pressed on the lung tissue of the upper and lower lobes, giving the changeable physical signs that arise from the varying amount of air in the lung vesicles

X-ray Examination—Considering that we were dealing with a case of interlobar empyema we made a radiogram A large oval shadow with sharp edges, the periphery darker than the center was readily seen, the center corresponding pretty nearly to the normal position of the fissure The right diaphragm was quite as low as the left, as though Nature had determined to make as much room as possible for the collection, thus avoiding tension. Operation demonstrated the correctness of the diagnosis

This case was to me very instructive, inasmuch as I had been asked some weeks previously to interpret an almost identical plate made from a patient whom I had not seen clinically The differential diagnosis of the plate seemed to rest between a cyst of the lung and a loculated collection of fluid dependent on a local pleurisy or a rib tuberculosis I thought it unlikely to be a cyst, inasmuch as I would have expected a cyst of such size growing in the soft lung parenchyma to have been more rounded I, therefore, considered it to be due to one of the two latter conditions Later I saw a more recent radiogram of the same patient The oval shadow had vanished, the lung was quite clear, but now there was a little fluid in the pleural cavity which finally disap-

peared In view of the correlated picture of the previous case and the two radiograms of this case, I believe it was a case of interlobar serous pleural effusion which had ruptured into the general pleural cavity and in that way a cure had resulted

So much has been written on the value of the x-ray in the diagnosis of aneurism of the arch of the aorta that I have little to add on this subject. However, I have never seen such an aneurism depicted on the plate (and I have seen many) which did not give rise to clinical signs and whose presence ought not to have been surmised previous to the radiographic examination I have watched patients in which I thought such to be the case, but they turned out to be examples of arteriosclerosis of the arch, the plate showing the characteristic knob on the left side In such connection I would again emphasize the mistake made by so many of not cultivating the sense of percussion, palpation resistance, in percussing out dulnesses in this area, especially is this method of value in cases complicated by emphysema which may otherwise hide the aneurismal enlargement But I do not doubt that there do occur small saccular aneurisms which exhibit no chest physical signs and which, of course, are distinctly visible on a good plate

I would like here to refer to a remarkable case which I lately saw An old man with Bright's disease had paralysis of one vocal cord I carefully overhauled his chest for indications of aneurism and could find none The interne, Dr Loos, made the postmortem examination and reported a small saccular aneurism He removed the heart and big vessels in mass with the contained blood I saw the specimens and noted the presence of the aneurism, which was about the size of half a marble We emptied the heart and aorta, and, lo! the pouch disappeared and its wall became in line with the adjoining walls, but remained somewhat loose Two other physicians then entered the room, neither of whom could see any indication of the pouch Such an occurrence must have been due to the wall at this point possessing enough elasticity to retract when once the dilating internal blood was removed, and this opens up the question whether functional dilatations are not temporary aneurisms and whether the vessels do not sometimes change at death just as may the size of the heart chambers

I desire to add one word concerning dilatation or aneurisms of the descending thoracic aorta I have seen several patients who have complained of one-sided chest pains, pseudoanginal in character, but without the other usual accompanying symptoms of anginal attacks They have had this pain for years and have shown a markedly high systolic blood pressure In some of these patients presenting no physical signs apart from a markedly accentuated second aortic sound, dilatation of the descending thoracic aorta can be shown as it runs behind the heart, and, though I have carefully looked, I have been able to find no corresponding correlatable physical signs Potassium iodid in large doses alleviates and often dissipates the pain

THE PNEUMOTHORAX GROUP

Case 7 —*Patient and History* —A young man, apparently in good health, had been seized some weeks previously with sudden left sided chest pain Since then he had been somewhat dyspneic but had continued to get about

Examination —The left side of the chest moved less than the right though it was more prominent, the percussion note was hyper resonant, the respiratory murmur somewhat faint, the left diaphragm low and moved little or none. There was no amphoric note, no amphoric respiration, no coin sound, no displacement of the heart and, because of the absence of these supposedly characteristic signs, an error was made in diagnosis

X ray Examination —With the fluoroscope I was able to convince the doubters that a pneumothorax was present as the lattice work of the chest was unnaturally bright, and the lung could be plainly seen lying along the vertebral column It expanded a little at each inspiration and pulsated in an expansile manner apparently synchronously with the heart. Similarly in a considerable number of patients with pleuritic effusion I have been able by the use of the fluoroscope to confirm my clinical suspicions that air had been unintentionally admitted owing to bungling tapping

There is no doubt but that there is a tendency for physicians to rely too much on the presence of so-called pathognomonic signs in the diagnosis of disease This has been very apparent in the course of the work we have attempted to do and has been responsible for many diagnostic errors It takes some time before one can successfully inculcate in a new batch of senior students that there are practically no pathognomonic signs, but that the diagnosis must be made from a much broader standpoint, and in that inculcation the ray has been very serviceable

THE HEART AND PERICARDIUM

As is well known, the auricular and ventricular pulsations can be plainly seen with the fluoroscope and the size of the respective chambers noted, and thus percussion ability can be gauged and acquired I have not been able to time them, and in one thick-set patient with block heart the fluoroscopic examination was unsatisfactory In such cases multiple tracings are to me much more convincing than any fluoroscopist's opinion

In two patients referred for an x-ray chest examination I was able to suggest the presence of a pericardial exudate Both patients were ambulatory In one the pericardial exudate complicated a carcinoma of the mediastinum, in the other, lung and peribronchial tuberculosis No postmortem was allowed of the first, but the pericardial sac in the other patient contained 300 c c of fluid The diagnosis was suggested in both by radiograms As I had not previously clinically examined the patients I can not say what had masked the exudate We must admit, with Jones of Memphis, that many cases of pericardial effusions pass unrecognized I can not but believe that some of the big dilated hearts that have diminished so wonderfully in size under Nauheim or Schott treatment have really been instances of unrecognized pericardial effusion One example of this has lately come under my observation and its interpretation was plain The failure to recognize these cases seems to be due to neglect on the part of the physician

1 To suspect its possible presence

2 To examine the patient in both the upright and recumbent positions

3 To compare the apex beat and the outer limit of percussion resistance

4 To test for palpation sensitiveness

Some time ago I demonstrated plates which strongly suggested the existence of pericardial adhesions For some months we had been testing, in hospital and clinic, the value of the clinical signs supposedly indicative of their presence Our records were unfortunately burned With Tallant we found Broadbent's posterior systolic retraction present in many patients in which there was no suggestion of adhesions, and the[illegible] came to autopsy none was found T[illegible] the position of the maximum retr[illegible]

piration In a small number no such change occurred In these, other signs indicative of the existence of adhesions were evident, and it was in these that the radiograms also suggested their presence The clinical recognition of these adhesions is at times easy, in other cases difficult, and in the latter class the ray is of distinct assistance

ESOPHAGEAL DISEASES

In some of these the radiograms, if correctly interpreted, will be of assistance But we must never forget that esophageal tumors may pulsate and, in cases of abscesses, may actually show an expansile pulsation We will avoid error if we remember that any tumor that has given rise to difficulty of swallowing as its first symptom is almost certainly esophageal in origin, however much it appears on the fluoroscope to resemble an aneurism Again, in cases of esophageal pouches or dilatations consequent on spasm of the cardia, the radiogram will be of much service and will fulfill a function to which I have not alluded, viz prevent dangerous inquisitive diagnostic meddling The history of the patient, plus radiograms made with the pouch or dilatation, empty and then with the pouch containing milk with bismuth in suspension will render the diagnosis so easy as to make it superfluous to fiddle with double tubes or queer sounds, by the use of which perforation or ulceration may be produced. A physical sign, which as far as I know, has not been hitherto described, occurred in a case of an esophageal pouch and consisted in a change of pulse rhythm according as the pouch was empty or full The change was more marked on deep respiration, and is, of course, readily explainable by the proximity of the pouch to the vessels, it, when full, exerting pressure on them. Reflection suggests that this pulse variation might be confined to one side, depending on the position of the pouch

In esophageal diseases the correlation will be between the history, the symptoms and the radiogram, and hence a full history with events chronologically arranged is of extreme importance

DISEASES OF THE ABDOMEN

The diagnostic value of the *x*-ray in the diagnosis of renal, ureteral and bladder calculi and of vertebral and iliac disease is so universally recognized that little comment is here necessary But we must not forget that shadows simulating those cast by calculi have been thrown by calcified retroperitoneal glands, by sesamoid bones, etc, so that some surgeons have even gone so far as to introduce a leaden stylet into the ureters and then photograph it *in situ* in order to determine if the doubtful shadow lay in the line of the ureter shadow Such a proceeding is rarely necessary if we will properly correlate our clinical and radiographic findings and if we remember that segregation of the urine or, better, ureteral catheterization is as much demanded in the diagnostic study of these cases as radiography Not infrequently the shadows of the kidneys themselves can be distinctly outlined on the plate, their relative size compared and any irregularity of the border noted.

I have never obtained definite radiographic outlines of the normal liver, but in cases in which pathologic changes have taken place in that organ modifying its density I have frequently succeeded in plainly outlining it on the photographic plate Thus at the San Francisco County Medical Society I lately demonstrated a series of radiograms showing

1 A Riedel's lobe.

2 A much enlarged liver which turned out to be the result of syphilis

3 Another in which the enlargement was due to a liver abscess

4 A series in which a corset lobe was plainly visible, running down toward the iliac crest.

5 A number in which the shadows cast by intrahepatic gallstones were distinct

Of much help in the interpretation of some of these plates was the position of the large intestine, in liver enlargements its shadow ended at the lower border of those enlargements and, however big the liver was, the normal oblique line of its lower border was maintained In kidney tumors, on the other hand, the bowel ran up alongside the tumor toward the shadow cast by the liver above The nature of these masses could be readily detected by clinical means alone if the clinician persevered or varied his methods till he obtained complete relaxation of the abdominal wall, and then always remembered to trace the whole extent of the lower liver border These points, however, received altogether insufficient attention from those working in the clinics Similarly I have succeeded in registering on the plate a huge leukemic spleen, the notch being distinctly visible in a patient who had been supposed to possess a tumor of renal origin The blood picture was pathognomonic, however

We can learn much of the position of the stomach, its size, its division into pathologic compartments and the likely therapeutic value of an abdominal support from radiography I have not yet succeeded, as Hemmeter has, in getting radiographic evidence of the presence of a gastric ulcer, but have several times been guided to a stomach carcinoma

I have up to now received little aid from the ray in the diagnosis of brain lesions But it is probable that the technic which allows one to get beautifully clear anteroposterior views of the cranial air sinuses will help considerably in the differential diagnosis of the cause of the various headaches.

In conclusion I would suggest that

1 Bilateral local functional spasm of the diaphragm can occur

2 An appreciation of percussion resistance is of more assistance in diagnosis than is the percussion note.

3 An interlobar pleural effusion is sometimes serous, and hence the term interlobar empyema is a misnomer

4 So-called functional dilatation of blood vessels are really temporary aneurisms, and that the vessels may change at or after death.

5 As Tallant has shown, many persons present the Broadbent retraction of the left lower posterior chest wall In those cases in which there are no adhesions I have found that the position of the maximum retraction varies with the respiratory phases, being higher during expiration, lower during inspiration, while in cases with adhesions this change does not happen

6 In patients presenting a pouch of the esophagus a change of pulse rhythm may occur, according as the pouch is empty or full, this variation being better marked during full respiration

7 Pericardial effusions are often unrecognized and probably some cases of dilated hearts which have undergone extreme reduction in size from the Nauheim treatment have been instances of pericardial effusion

8 The correlation of clinical and Roentgen diagnostic work as outlined will be of value as follows

A It will much increase the average physician's percentage of successful diagnoses

B It will enable even the expert clinician to assert that certain lesions are present whose existence he could otherwise only suspect, as e g, peribronchial tuberculosis, central patches of pneumonia where the feeding bronchus is blocked, certain cases of bi- or triloculated stomach, and it will assist him to maintain a uniform standard, since it will tend to save him from errors made when he is brain weary and hurried

C It will be of some assistance in the relations between physician and patient

D It will sometimes render unnecessary dangerous inquisitive diagnostic methods, as, e. g, in esophageal pouches or dilatations

E It will assist the clinician in his endeavors to develop a high degree of clinical skill, helping him to sift his clinical armamentarium

F It will aid considerably in teaching especially where it is necessary to correct rather than to instruct

ADDENDUM

In exposing many hundreds of patients for diagnostic purposes I have produced one burn That was during the early work and should have been avoided The burn healed with a good scar I have seen no other evil results in patients The summation of exposures renders the operator's task risky and dangerous Protection must be thorough, and I would advise the clinician to have nothing whatsoever to do with radiotherapy

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MULTIPLE NEURITIS (NON-DIPHTHERITIC) IN CHILDREN *

H M THOMAS, M D, AND H. S GREENBAUM, M D
BALTIMORE.

Multiple neuritis in children is generally considered a rare condition In Starr's[1] analysis of 154 cases of multiple neuritis non-diphtheritic, none of the patients were under 15 years of age In Remak's[2] series of 94 cases, 9 patients were between 10 and 20 years of age, but none below Gowers[3] refers to it as extremely uncommon, as does Oppenheim[4] Sachs[5] considers the question thoroughly and appears to have seen a number of cases, but gives no definite data

Holt[6] speaks of the chief cause of multiple neuritis in children as being diphtheria, although it is occasionally seen after infectious diseases He states that the metallic poisons rarely cause multiple neuritis in early life, and the same is true of alcohol He refers to certain cases which have been assigned to simple exposure to cold Buzzard[7] thinks it probable that a number of cases of so-called infantile paralysis are examples of multiple neuritis, especially those in which the patients make an exceptionally good recovery after a very long delay

Cases of multiple neuritis in children have occurred in epidemics, usually associated with epidemics of anterior poliomyelitis Medin[8] reports a most interesting series of cases which show this association He studied cases occurring about Stockholm, viz 43 or 44 epidemic cases occurring in the year 1887, 29 sporadic cases occurring between 1888 and 1894 and 21 epidemic cases occurring during 1895 These were almost all cases of anterior poliomyelitis, but in the epidemic cases in 1887 he saw 6 of multiple neuritis and 2 during the epidemic of 1895

The cases which Hammond[9] reported in 1895 occurring in an epidemic at Bridgeport, Conn, seem to have been almost exclusively cases of multiple neuritis He recorded 10 in which the patients ranged in age from 4½ months to 4½ years, the youngest child died of inanition and dysphagia, the others improved Caverly[10] and MacPhail[11] report a series of 126 cases of infantile paralysis occurring during the summer of 1894 in the city of Rutland, Vt. These cases were for the most part anterior poliomyelitis, "but in some there were elements strongly suggestive of multiple neuritis." Blackall[12] reports an epidemic in Australia His 6 cases seem to have been cases of multiple neuritis These cases occurring in epidemics are supposed to be due to some acute microbic infection, which it seems at times affects the spinal cord, at times the peripheral nerves and more rarely the brain and its membranes

One of us (Dr Greenbaum) has collected from the literature and tabulated 138 cases of non-diphtheritic multiple neuritis occurring in children These cases are made up as follows

	Total	Boys	Girls	Not mentioned.
INFECTIOUS CASES				
Grippe	3	–	1	0
Measles	8	–	5	1
Typhoid	5	4	1	0
Tuberculosis	1	1	0	0
Syphilis	2	0	0	2
Whooping cough	7	5	2	–
Chickenpox	1	0	0	1
Scarlet fever	6	2	4	0
Miscellaneous	15	6	5	4
	48	20	18	10
TOXIC CASES				
Lead	19	11	6	2
Alcohol	5	–	0	0
Carbon monoxid	1	1	0	0
Arsenic chorea	18	4	13	–
Arsenic non chorea	4	2	1	1
	48	23	20	5
Ascending palsy	9	3	3	3
Unknown origin	33	11	9	13
	42	14	12	16
Total number of cases				138

In addition to these cases, Starr[1] says

All alcoholic drinks are not equally prone to produce paralysis I have seen a case in a child of three years who had been given beer several times a day for several weeks

Sachs[5] states

I have seen several cases of this description (malarial neuritis) in children who were brought to my clinic from the swampy parts of Long Island

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Fifty-seventh Annual Session June 1906 This paper was accompanied with a tabulated report of 138 cases for which THE JOURNAL could not give space The author offers to send a reprint of the complete article including the case reports, to anyone on request. The entire article will also appear in the volume of Transactions of the Section on Nervous and Mental Diseases of the American Medical Association 1906

1 Organic Nervous Diseases" pp 102 and 120

2 See Nothnagel's Spec. Path u Ther xi 3 p 322

3 Diseases of the Nervous System" 3d ed 1 p 152.

4 Diseases of the Nervous System p 376 2d Am ed 1, p 374 2d German ed

5 Nervous Diseases of Children 2d ed

6 Diseases of Infancy and Childhood 2d ed p 871

7 See Goodhardt Children's Diseases 1899 6th ed p 487

8 See Neurol Centrbl 1891 p 397 1896 p 1119 1898 p 707

9 Med Rec Nov 9 1895

10 THE JOURNAL A M A 1896 p 1 Med Rec 1894 Dec. 1 p 673

11 Montreal Med Jour No 23 p 417

12 Australian Med Gaz 1904 July 20 p 347

Webber[13] says

Of all the patients, the youngest was nine years old. This is the youngest child in the list.

According to Oppenheim [4]

I have seen it several times in children from four to six years old.

It seems to us that the disease is probably not so uncommon as has been generally stated, but that the cases are not reported either because they are mistaken for ordinary infantile paralysis or else are not thought sufficiently interesting Our experience in the Neurological Dispensary of the Johns Hopkins Hospital is somewhat unusual in two respects 1, in the rather small number of cases of multiple neuritis in general, 2, in the large proportion of children we have seen among them In the past 16 years, with an average of 1,200 new neurologic cases a year, we have seen only 21 cases in which the diagnosis of multiple neuritis (non-diphtheritic) has been made, and, out of these, 8 have occurred in children under 12 This does not include hospital cases where the severe adult cases are more apt to be sent directly Among ward cases was one case of a child which was not recorded in the dispensary The cases which we have to report include 5 girls and 3 boys, their ages being 3, 4, 5, 6, 9, 10, 10 and 12, respectively Three of them followed typhoid fever, two of them having already been reported by Dr Osler In the other 5 cases we were entirely unable to determine any etiologic factors

The clinical picture in all the cases was typical of multiple neuritis The onset was generally acute with lassitude, fever and loss of appetite Both arms and legs were affected in every case and practically symmetrically Electric changes were generally present and the deep reflexes were lost in every case but Case 4, that of a girl of 12 We were never able to explain the persistence of the reflexes in this single case, unless it might have been a case of lead poisoning In lead cases we have noticed that the knee-jerks are apt to be exaggerated even at times when the legs were also themselves involved All the patients improved, the arms improving first in every case except Case 4, the girl referred to, in whom the legs improved rapidly, but in whom, now 9 years after the onset, there is a stationary bilateral atrophic paralysis of the intrinsic muscles of the hands This perhaps also indicates lead poisoning

In a number of children there has been a tendency to the development of a slight contraction of the calf muscles One of the patients showed a definite recurrence, and one two or three relapses [14] The recovery in all was slow, extending over several months We include only short abstracts of the cases

CASE SUMMARIES

Case 1 —Previously reported by Dr Osler

Patient —D S boy aged 9, was admitted to the Neurological Dispensary, Nov 1 1893

History —Patient had a severe fever of three weeks' duration during convalescence, weakness of arms and legs with finally complete paralysis, foot drop and wrist drop, great soreness of the muscles, progressive improvement, complete recovery after persisting for more than a year

Present Condition —Patient was seen April 17, 1906 had remained well, in perfectly normal condition except perhaps some slight weakness of the anterior muscles of the lower leg "Can raise himself on his toes but not on his heels"

Case 2 —Previously reported by Dr Osler

Patient —G R, boy, aged 10, was admitted to the Neurological Dispensary,

History —In September, 1894, he had had a severe attack of typhoid fever, in third week soreness in leg, gradual paralysis of arms and legs, on admission feebleness of arm muscles, grasp extremely feeble, double foot drop, typical steppage gait, reaction of degeneration in leg muscles, great muscular soreness, arms and legs, discharged Feb 4, 1895, after considerable improvement

Case 3 —Referred to by Dr Osler as a case following exposure to cold

Patient —H. J F, aged 10, was exposed to wet and cold in September, 1894 On following morning complained of weakness in arms and hands In the afternoon his legs were weak, by night he could not walk, was in bed for a month with fever and delirium "He became perfectly helpless, but never at any time were there symptoms of typhoid fever"

Clinical History —Patient was admitted Jan 2, 1895 He was then pale and weak, walk typically steppage, cranial muscles, neck, shoulder and upper arm muscles all good, muscles of wrist, weak, dorsal flexors weaker, fingers were paralyzed, in legs, typical foot drop, could not extend or flex the ankles, there was no particular sensitiveness of the muscles, sensation appeared normal, deep reflexes were absent, electrical changes in the weakened muscles

Discharged from hospital, March 23, greatly improved Returned later, in 1897, with arms perfectly normal, still some weakness of the ankle In 1898 the right foot was almost completely normal, still some weakness on the left side

Case 4 —Patient —L N, girl, aged 12, was admitted to the Neurological Dispensary in August, 1897, sick with fever and vomiting and pain in limbs

Examination and Clinical History —On examination she presented a typical picture of multiple neuritis, double wrist and foot drop, except that the deep reflexes were all exaggerated She could not sit up in bed, arms and legs seem to have been extremely weak By September she had improved somewhat, could sit up and walk with assistance Arms and legs were still very weak.

Subsequent History —We were never able to find any etiologic factor, although we inquired diligently into her surroundings We saw her constantly from 1897 to 1901 and infrequently since She improved very greatly, particularly in regard to her legs which became normal She was examined this year, is in excellent health, no abnormality about the legs, but her hands show a symmetrical atrophy, with loss of electrical response. This has been present and has not increased for the last eight or nine years The deep reflexes are present and active, but not exaggerated

Case 5 —*Patient* —N D, girl white, aged 5, came to dispensary complaining of pain in legs and inability to walk, May 31, 1900

History —Patient had had good surroundings, no indication of any source of poisoning, she had always been a nervous child On May 1 she became listless and feverish, appetite was poor, complained of pains in legs and arms, arms and legs became weak, manipulation of arms and legs was painful, when she entered the hospital she had double wrist drop (slight), triceps reflex was present, double foot drop unable to walk, slight knee jerk. Decreased electrical excitability in arms Partial reaction of degeneration in legs

Subsequent History —Condition improved first in arms, she walked in September, was discharged from hospital, Oct 18, 1900 During her stay in hospital she had irregular temperature, 101 5 being the highest. Child was fairly well through winter, but in summer of 1901 there was a recurrence of the neuritis which lasted a little over a month She was examined in March, 1906 There have been no other recurrences, condition of her muscular system was practically normal, slight contracture of the gastrocnemius on each side, instep slightly more arched than normal, electrical reactions were normal

Case 6 —W E girl aged 3, white

History —Child had been rather sickly In February, 1905,

13 Multiple neuritis., Archives of Medicine vol xii p 42

14 Since the paper was read this patient had a sudden attack of some acute disorder The paralysis seemed to recur again and the patient died.

was operated on for swollen glands, in March had double pneumonia, during April and May was perfectly well No source of poisoning was discoverable In June she became fretful, had no appetite, was easily tired In July she suddenly collapsed, arms and legs weak

Clinical History—Patient came to hospital Aug 3, 1905, when she could hardly sit up There was typical bilateral wrist and foot drop, reaction of degeneration in muscles below elbow and knee, deep reflexes were absent, muscles were tender on pressure Patient was given galvanism and massage daily In a month her hands began to improve By November she could stand alone and walk by holding her mother s hands Deep reflexes in arms present, knee jerk present, but ankle reflexes were not obtained Condition continued to improve, but on December 6 there was a distinct relapse, particularly in the legs Again began to walk December 18, and after that improvement was continuous Note on April 12, 1906, records almost complete recovery, except slight contracture in the calf muscles

CASE 7—History—A S, girl, aged 4 white, of a good German family, had had measles in May which lasted for two weeks About the middle of June, 1905, she began to be fretful, had pain in stomach back and legs, vomited gradually lost power in walking and in a week was entirely unable to also unable to use her hands

Clinical History—She was brought to the dispensary Nov 11 1905 There was no cause ascertainable except, perhaps, that she had been given "a mouthful of beer two or three times a week" There was bilateral wrist drop, also some muscular atrophy, deep reflexes were absent, there was bilateral foot drop *Movements of upper arm and legs above knee were normal* Calf muscles were slightly contracted On left side knee jerks were absent, right, just obtained There were no reflexes from ankles Pressure over muscles and nerves in arms and legs caused no pain Typical reaction of degeneration in muscles of arms and legs

Galvanism and massage daily On November 19 the patient walked with typical steppage gait She improved steadily In March, 1906, the hands were nearly normal and the walk good There was slight contracture of the gastrocnemius In April, 1906 knee jerks were normal

CASE 8—*Patient*—B F, girl, aged 6 from West Virginia, was seen in the dispensary with Dr Baer

History—Patient was a strong child up to her illness with typhoid fever Oct 8, 1905 she was very ill, had two relapses, became weak some time during the illness, just when is not known She was sent to St Marys Hospital Clarksburg, W Va, Nov 17, 1905, at which time both arms and legs were paralyzed She improved greatly, left the hospital Feb 18, 1906

Examination—On May 26, intrinsic muscles of the hands were slightly atrophied, muscular strength was fair deep reflexes were doubtfully obtained, she walked with the typical steppage gait, strength of the hips and knees was good, there was marked weakness in flexors of ankles, the extensor calf muscles were stronger, knee kick was absent on right doubtfully obtained on reinforcement on left, ankle reflexes were absent, plantar stimulation gave no response pressure over leg muscles was not painful, electrical changes in legs were present but not definitely determined on account of extreme irritability of child

ADDITIONAL CASES

A case seen in the ward of the Johns Hopkins Hospital has already been reported[15] because of its interest in relation to generalized lead paralysis

CASE 9—A girl, aged 5½, was in the habit of scraping the cans in which the food came Her arms had been weak for three months but two days before admission her legs became so weak that she was entirely unable to walk. There was a lead line on her gums knee jerks were normal Unfortunately she remained in the hospital only two days

CASE 10—R L., girl aged 8, had multiple neuritis following chorea and arsenic Patient was seen with Dr Cary Gamble, who will publish it in detail later[16]

History—During August and September 1897, she had slight attack of chorea and was given Fowler s solution in seven drop doses She took it in two courses and received in all 504 drops in about one month On September 27 she began to lose power in legs and to complain of pins and needles

Clinical History—On October 1 she was admitted under Dr Gamble s care to St Joseph s Hospital She had an arsenical skin eruption and complained of pins and needles in the calves of her legs, which were almost completely paralyzed There were sensory changes over legs Nerves and muscles were sensitive Her condition remained practically the same until on October 18, when she began to complain of tingling in fingers, and on October 21 both hands became paralyzed Next day she began to have difficulty in breathing, with rapid pulse This was relieved by electricity, but the attacks recurred On October 28 it was noted that the diaphragm was paralyzed She died October 30

SYMPTOMATOLOGY

From a review of these cases and of the cases found in the literature, it appears that the clinical picture of multiple neuritis in children does not differ in any material manner from that presented by the disease in adults Sensory troubles are difficult to determine in children, still subjective pains, paresthesia pains on pressure over nerves and muscles, and pain on moving the limbs, either actively or passively have all been described Objectively, a decrease in the sense perceptions to touch has been found, together with pain and temperature as well as a delay in their conduction The sensibility has been noted as normal in a number of cases Sensory disturbances when present do not as a rule persist for a long time

Electric changes have usually been found, although in certain of the cases the reaction has been noted as normal The change may be only a decrease in excitability but usually one of the grades of the reaction of degeneration is present Atrophy is generally present and may be permanent The deep reflexes are usually lost but in certain cases have been noted as normal The reflexes, if lost, usually return as the patient gets well

The distribution of the paralysis is usually widespread and symmetrical, affecting both the upper and lower limbs but the legs are generally more severely involved than the arms This is especially true in cases following infectious diseases In the lead cases both the upper and lower limbs were involved 15 times In two, the legs were alone involved This confirms the statement which is generally made that lead paralysis in children is apt to involve the legs In one of these cases one side alone was involved In the alcoholic and arsenic cases the paralysis has affected both the upper and lower limbs but here again the legs were more severely affected The arms and hands are seldom involved alone and in recovery they usually recover before the legs and feet

DIFFERENTIAL DIAGNOSIS

In diagnosis, the chief difficulty is to differentiate it from poliomyelitis but the following points will be of help

1 Multiple neuritis comes on more insidiously than poliomyelitis, but this is not always the case

2 The cause in multiple neuritis may be known such as metallic poisoning or a previous acute illness In poliomyelitis the cause is unknown

15 Johns Hopkins Hosp Bull 1904 xv p 179

16 This case is referred to Practice

3. Fever is more apt to occur at the onset of poliomyelitis.

4. Subjective pains may occur in either but are perhaps more apt to occur in multiple neuritis and to last longer.

5. Objective disturbances in sensation, although difficult to estimate in children, point to multiple neuritis. Pain on pressure over muscles may occur in either.

6. Poliomyelitis may attack a single limb or the limbs in any combination and involve any group of muscles, but the paralysis is practically never bilaterally symmetrical and rarely affects all four limbs at one time. A widespread symmetrical paralysis is very characteristic of multiple neuritis.

7. Complete or nearly complete recovery is the rule in multiple neuritis; it is the exception in poliomyelitis.

8. A return of the knee-jerks and of the electric reactions to normal suggests the existence of multiple neuritis.

Besides poliomyelitis, the disease may in certain cases have to be differentiated from Friedreich's ataxia, tabes, hysteria, interstitial neuritis of Dejerine, progressive muscular dystrophy, myelitis, rickets, Pott's disease, progressive muscular atrophy and meningitis, but in these the history and associated symptoms makes the differentiation easy, and in none of them do we see the typical bilateral foot-drop and wrist-drop.

PROGNOSIS

Prognosis is good. We note complete recovery in 58 of the cases in literature, in 46 partial recovery at the time of the report. In one case recovery failed to take place and in 33 cases no mention is made as to the course of the disease. Fourteen cases were fatal: two arsenic, two alcohol, one lead, one unknown, six ascending paralysis, one angina follicularis, one syphilis. Of these four have autopsy reports as follows:

Autopsy Reports.—Kahler and Pick: Nothing abnormal in nervous system.

Kast: Patient died of aspiration pneumonia. In the microscopic and macroscopic investigation the central nervous system was found normal. On the other hand striking degeneration of the peripheral nerves, especially the hypoglossi, recurrent laryngeals, etc. The exact investigation of the rest of the peripheral nerves is not given, however it is conjectured that there are peripheral processes giving a symptom complex which clinically imports a spinal or bulbar disease.

Campbell: Pneumonia, tuberculosis, etc., disseminated degeneration of the myelin containing fibers through the white substance of the spinal cord and especially prominent in the posterior columns. Further, partial degeneration of the anterior and posterior nerve roots and finally degeneration in the peripheral nerves which, to be sure, was not of very high degree but was developed stronger peripherally.

Fergerou: Fanvier at autopsy found the nerve centers normal.

We note that five of the cases are recurrent: scarlet fever (Egis-Basette-Eglise), whooping cough (Surmay), unknown (Chapin).

TREATMENT

In treatment the cause, if possible, should be removed. A nourishing diet should be given, the bowels kept open. Rest in bed in the early stages, quinin in the malarial cases, massage, electricity, passive exercise, mild gymnastics and hydrotherapy are helpful. A tonic may be given. The pains usually disappear spontaneously; if they do not, hot baths or bromids will relieve them. If a permanent foot-drop or wrist-drop remain, the orthopedic surgeon may be consulted.[17]

DISCUSSION

Dr. W. N. Bullard, Boston, said that he has seen a number of cases of this character, and asked Dr. Thomas if it is not possible that some of these unexplained cases were really due to diphtheria. In some of his own cases he has found it exceedingly difficult to discover the preceding disease, but many of them have been traced back to diphtheria.

Dr. H. M. Thomas, Baltimore, said that it is always hard to exclude anything absolutely, but that the cases to which he referred were not regarded as diphtheritic. The paralysis was different from that characteristic of diphtheria. The throat was not involved and there was no paralysis of accommodation. There must have been some toxin the cause of which was unknown. Certain cases of multiple neuritis in children have occurred in epidemics, usually in association with epidemics of anterior poliomyelitis, and it would look as if the same poison might be a cause of the two conditions.

A NEW MODE OF TREATMENT FOR INOPERABLE CANCER OF THE UTERUS BY MEANS OF ACETONE.*

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ST. LOUIS.

In recent literature there is a remarkable dearth on the subject of the treatment of inoperable cancer. The interest of the profession seems to be absorbed by the problems of earlier diagnosis and more radical operation in cases which are still within the reach of the surgeon. Yet so long as the usual means of treatment fail to relieve in any degree the deplorable fate of the unfortunate ones who are beyond that reach, the attention and energy of the profession must also be claimed for improvements along the lines of treatment of inoperable carcinoma.

A rapid survey will substantiate these claims as far as inoperable cancer of the uterus is concerned. The much-heralded trypsin treatment has not come up to its promises. It has utterly failed in my cases and in those of most of the other observers. Roentgen-ray therapy in uterine cancer thus far at least has not accomplished any beneficial results. The experiences gained in the St. Louis Skin and Cancer Hospital prove that the Roentgen rays can not reach and destroy malignant growths in the cavities of the body.

The soundest suggestion of recent years is undoubtedly that of Lomer who advises curetting and thermocauterizing the diseased area thoroughly and repeating this procedure at regular intervals of four weeks. Thus by an extensive cicatrization of the cauterized tissues the remaining cancer cells impaired as they are by the effect of the burning heat would be deprived of their necessary nourishment. Unfortunately, this plan of treatment can not easily be carried out in practice. There are but few patients in my experience who will submit to these periodical operations, and I am not aware that Lomer's valuable suggestion has been confirmed by many reports from other quarters.

The hosts of other remedial agents need only be mentioned in order to be dismissed as absolutely useless.

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17. For additional literature the reader is referred to the following: Abundo, Quoted in Neurol. Centrbl., 1891, No. 10, p. 396; Oder, Studies in Typhoid Fever, ii, p. 404 to 411; Perrin, Arch. de Méd. des Enfants, Dec. 1902, p. 731.

* From the St. Louis Skin and Cancer Hospital.

Thyroid feeding, administration of drugs such as chelidonium majus application of calcium carbid, electricity, the cancroin of Adamkiewicz injections of various sera or of irritating substances such as alcohol acetic acid, corrosive sublimate, methyl violet venom of the cobra di capello oil of turpentine, and arsenious acid

The reader must bear in mind that with the exception of trypsin and, perhaps of the Roentgen rays, which aspired to a radical cure all these modes of treatment merely aimed at making the patient's life endurable so long as it lasted The primary object was and still is, to reduce the weakening hemorrhages and to check the intolerable stench of the discharge Yet our pitiable helplessness in this respect can not be better illustrated than by the fact that two surgeons (Gottschalk and Kuestner) independently of each other devised an artificial occlusion of the vagina (colpocleisis) as a last though but temporary resort

It is this distressing odor that has defied all our efforts It is this odor that, in reality, constitutes the most formidable symptom of the disease that makes devoted children wait almost impatiently for the death of a beloved mother, and that tends to break up all ties of family and friendship

For the same reason, such patients are not willingly admitted in a general hospital In an institution of the nature of the St Louis Skin and Cancer Hospital they seriously menace the workings of the hospital Attending physicians as well as nurses suffer from the unbearable odor, and operable patients or those afflicted with less loathsome forms of cancer are easily driven away

There was, then every reason for trying to improve the existing conditions For the last year and a half I have tried or tested a number of chemicals, without however receiving more than a passing encouragement I may discuss the relative merits of these remedies in a later publication In this report I merely wish to call attention to a new mode of treatment which thus far has yielded unexpectedly good results and which in the limited number of cases in which it has been employed seems to have successfully met the chief requirements in the treatment of inoperable cancer of the uterus

This treatment consists of the methodical application of acetone Acetone (Dimethyl-ketone, C_3H_6O) may be found, in traces in every normal urine and it increases in fever with starvation or with a purely meat diet It is familiar to the clinician from its occurrence in the urine in cases of diabetes mellitus in certain forms of digestive disturbances, and in some cases of carcinoma Recently it has also been found in the urine of patients with ectopic gestation

Physically acetone is a transparent, colorless mobile and volatile liquid of a characteristic ethereal odor and a pungent, sweetish taste On the skin it causes the sensation of cold It has found extensive use in laboratory technic for hardening tissues prepared for microscopic examination Tissues shrink rapidly in acetone owing to its intensely hygroscopic qualities and, if left in the fluid for more than half an hour they are as a rule too hard for the microtome knife

It was my idea to utilize these laboratory observations for practical purposes. If the ulcerating surface of the cancer could be hardened *in vivo*, the discharge could be checked until the escharotic portion would be cast off The resulting free surface could then again be hardened It would perhaps also, be possible to harden deeper portions or even the entire tumor thus rendering the malignant growth temporarily harmless

The treatment should, if feasible be preceded by a thorough excochleation of the ulcerating area The curetted cavity or crater is then carefully dried with cotton sponges and from one-half to one ounce of acetone is poured into the wound through a Ferguson or other tubular speculum For this purpose the pelvis of the patient must be raised as in Trendelenburg's position The narcosis may now be interrupted and the patient be left in this position for from fifteen to thirty minutes Next, the acetone is permitted to run out through the speculum by lowering the pelvis of the patient and the cavity is packed with a narrow gauze strip soaked in acetone The healthy mucosa of the vagina and the vulva are cleansed with sterile water and dried

After this preliminary curetting and cauterization the regular treatment which requires no further hospital care, is administered twice or three times a week beginning the fourth or fifth day after the operation This is done without narcosis and may be given with the patient in bed or on the ordinary examining chair or table in the office The pelvis of the patient is raised and the tubular speculum is inserted into the cancerous cavity With the progressive diminution of the crater smaller specula are gradually employed The speculum is filled with acetone and held in place by the patient's hand for half an hour, and is then emptied in the manner described above Care should be taken to prevent the acetone from running over the vulva or perineum

The immediate effect of this simple procedure is the following Any slight oozing is checked almost instantly The surface of the crater is covered with a thin whitish film, wherever there was an extravasation of blood, the discoloration is light brown The normal vagina is not appreciably irritated On the vulvar mucosa and the outer skin an excess of acetone produces a faintly white discoloration which soon disappears There is no pain from the cauterization save a slight stinging sensation if the acetone has touched the skin This, however passes away rapidly if the affected parts be washed with cool water In no instance have I been forced to employ any anodynes

The more remote effect manifests itself in a marked reduction of the intense odor The discharge, at first becomes more watery and gradually disappears With it disappears the former stench At the same time the hemorrhages fail to recur—at least in the cases thus far treated After two or three weeks of this treatment I have noticed a considerable diminution in the extent of the wound cavity The walls of the latter become smooth and firm There were no more polypoid excrescences, nor could the finger remove any friable tissue

Owing to the absence of weakening hemorrhages and discharges the general somatic condition of the patients improved visibly On the other hand, sensations of pain caused by the extension of the cancer to adjoining organs or nerve trunks beyond the reach of the acetone were not relieved, these required now, as before, administration of anodynes In order to determine if there was any absorption of acetone into the organism frequent examinations of urine were made both before and during the course of treatment These examinations have, so far, remained negative

Of the limited number of cases thus treated one or two may serve as illustrations

CASE 1 —Mrs F S, aged 42.

History—Present illness began June [illegible], 1906 with profuse hemorrhages, for which [illegible] "cauterized" by a physician in Texas, yet [illegible] discharge c[illegible] ued and she grew ra[illegible] She came St Louis and was [illegible] Oct 14

Nov 30, 1906, without relief She had persistent bloody discharge, severe pain in the lower abdomen which prevented sleep, and dysuria On Jan. 20, 1907, the patient was admitted to St Louis Skin and Cancer Hospital She was greatly emaciated and unable to walk

Examination—Pulse was rapid and hardly perceptible Anemia was excessive Hemoglobin, 35 per cent, erythrocytes, 2 907,000, leucocytes, 33,320

Urine Specific gravity was 1004, and the urine contained large quantities of albumin and blood corpuscles

Abdomen The lower abdomen was filled with a hard, immovable tumor which extended one inch below the umbilicus Within the vagina, about one inch above the entrance there was an annular constriction, beyond which the examining finger entered a wide cavity, the sides of which apparently were formed by the pelvic walls This cavity was filled with soft, friable masses which seemed to project from above downward There was a profuse watery, foul discharge which soon took on the character of a hemorrhage Excessive pain prevented further exploration

Diagnosis—Fibroid of uterus and carcinoma of cervix

Operation—On Jan 24, 1907, under ether narcosis, a thorough excochleation of the extensive cavity was done The soft masses within were largely necrotic and greenish in color A large amount of tissue was removed by the curette The cavity was packed with gauze saturated with acetone The condition of patient was alarming and stimulants were necessary A microscopic diagnosis of carcinoma was made

Postoperative History—Jan. 25, 1907, the dressing was removed. The patient was comfortable By February 7, 1907, she had been receiving acetone treatment of one half hour's duration three times a week There was no odor in the room, there was no hemorrhage, and only very slight discharge The patient had not had sufficient pain to require opiates except one night In the place of the former soft, friable masses, the crater was found to have contracted a great deal and scarcely admitted a finger The walls were irregular from projecting areas of firm tissue with smooth surfaces which did not bleed

February 19 Treatments had been continued and patient was gaining in strength and was able to walk about

February 23 The patient had been having some paroxysms of pain in the abdomen similar to those before entering, but she thought that the pain was not so constant, at times she had several days of freedom This was not the case before entering hospital, when pain was rather continuous There was absolutely no odor, at times there was a slight watery discharge There had been no hemorrhage since the acetone treatment was instituted The walls of the crater were contracting and were so firm that the examining finger or manipulations with sharp edge of glass speculum did not cause any bleeding In part the walls were covered with a grayish membrane easily detached and leaving no bleeding site, in other places the walls were clean and bright red, and did not bleed on pressure

CASE 2—Mrs R. W aged 33

History—She had been bleeding from the vagina almost continually for the previous three months and had had severe pain in the lower abdomen for about two months There had also been rapid loss in weight

Examination—This revealed a large cauliflower excrescence of the cervix uteri with involvement of the anterior vaginal wall and left parametrium Local application of lotio pancreatis (Fairchild) three times a week for about two months, failed to give any relief On Oct 10 1906 she was examined by Professor Wertheim of Vienna, during the latter's visit to St Louis and he pronounced her condition inoperable

Operation—On Oct 13 and Dec 3, 1906, a thorough excochleation and thermocauterization was done, followed by slight temporary improvement A microscopic examination showed carcinoma

Later History—On Jan 5, 1907, she was readmitted to hospital She had recently had several profuse hemorrhages There was a stinking discharge, and pronounced cachexia The tumor at this time involved the entire upper half of the vagina and extended deeply into the left broad ligament The tissues were friable and bled freely after examination.

January 11 Another thorough excochleation and thermocauterization was done under ether anesthesia

January 17 to 28 Local application of acetone was made through a tubular speculum every other day The odor was considerably lessened and there were no hemorrhages At times there was a pinkish discharge

January 31 Menses occurred, normal amount

February 6 to 12 Acetone treatment was continued. There was slight discharge, with no odor and no hemorrhage

February 21 The patient had been at work constantly prior to this date, reporting three times weekly for treatment She had good color and there had been no loss of strength in the preceding six weeks The crater walls had contracted so much that the narrowest speculum could not be inserted readily The induration extended on the anterior vaginal wall to about 1½ inches from meatus, and on the posterior wall to about 2 inches from the mucocutaneous border The crater was about 1¼ inches in depth Its walls were firm and did not bleed on digital examination The involvement of the left parametrium had not increased, rather the contrary The entire mass (uterus plus periuterine involvement), seemed somewhat more movable There was no odor or bleeding

February 22 Under ether anesthesia the crater was freely curetted, but only a small amount of tissue could be scraped away The scrapings were firm, bleeding was very slight. This excochleation was in marked contrast to former curettements on the same patient when large quantities of very friable tissues were removed with abundant hemorrhage The operation was followed by application of acetone

March 5 Undisturbed convalescence The patient looked and felt very well She had been menstruating normally for three days

March 15 She had received treatment regularly three times a week and felt well She stated that intercourse was indulged in without any bleeding The vagina was very narrow There was absolutely no odor nor discharge The patient was kept under regular treatment

EPICRISIS

These two patients suffered with unmistakable carcinoma of the uterus, clinical manifestations and microscopic evidence tallied In both patients the disease had long since passed beyond the reach of any radical operation and had even consumed the greater part of the vagina The condition of both patients was very low, due to persistent hemorrhages, and particularly deplorable owing to the unbearable odor of the ulcerating necrotic surfaces In both cases, the usual means of treatment had been conscientiously employed for several months, but had failed to bring the slightest relief The acetone treatment, on the other hand, completely overcame both discharge and stench and reduced the hemorrhages to a minimum

The enthusiasm with which original methods of treatment for cancer are usually published by their respective inventors stands in crying contrast to the late results as surveyed above, so that we have grown to look on new suggestions with a sort of suspicious reserve I have, therefore, refrained from permitting the wish to be father to the thought and have, in this preliminary report, limited myself strictly to stating certain observations made with acetone in the treatment of the unbearable odor of inoperable carcinoma of the uterus Incidentally, the effect of this treatment on the amount of discharge and hemorrhage has been noted I have given the technic in detail so as to aid those who are willing to afford a fair trial to this new mode of treatment which seems to produce no untoward effect, but which has brought material relief to the patients treated

I am greatly indebted to my associate, Dr F Hinchey, for his interest and assistance in carrying out these investigations

MYXEDEMA

CAMPBELL P HOWARD, M.D
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(*Concluded from page 1333*)

THYROID GLAND

The size of the gland may be difficult to determine owing to the associated fulness of the neck. In a very considerable number of cases, however, there is a distinct diminution in the size of the gland. In 61 patients of my series in whom the condition of the gland is noted it was atrophied or not palpable in 46 (75 4 per cent), in 3 of whom it was previously hypertrophied In the London series it was atrophied in 22 of 59 cases (37 3 per cent.), in 3 it was also previously enlarged Hun and Prudden[10] found that the gland was diminished in size in 78 per cent. of their cases In the London series there were 4 patients in whom there was definite hypertrophy at the time of the examination, which, with the 3 in each of the London and American series, in which there was a history of previous enlargement, make a total of 14 patients with hypertrophy of the thyroid gland *Apropos* of this occurrence, Ord,[31] in 1898, wrote

> It appears to me probable that we shall recognize in the near future more and more the occurrence of a stage of hypertrophy of the thyroid gland with or without signs of Graves' disease, as an antecedent of myxedema The enlargement of the thyroid in exophthalmic goiter is due partly to hyperemia and partly to change in the gland, which are apt in certain cases to determine proliferation of the epithelium surounding the cells, such proliferation ending in the replacement of the true glandular structure by fibrous material and consequent destruction of the functions of the gland.

NERVOUS SYSTEM

The nervous system is next to the cutaneous system in degree of involvement But it is rather a functional than an organic derangement, as only in a few cases are these symptoms due to organic changes in the brain and spinal cord The chief characteristic is a slowness in the execution of all the nervous functions, due, according to Ord, to the condition of the skin which interferes with the natural exposure of the nerve terminals to stimuli from without, and hence a failure of the natural stimulation of the centers

Cerebral Functions—Though the intelligence of the patient may be perfectly normal there is a large proportion of cases (37 in my series) in which there is a slowing of cerebration as to apprehension and thought. A prolonged interval may elapse before the nature of a question or command is grasped by the patient A mental lethargy or somnolence may be present, so that the patient sits for hours at a time in the same position, taking no interest in his surroundings and evidencing no sign of mental or bodily activity Charcot has likened this condition of apathy to the hibernation of the lower animals Abnormal persistence in thought may be present

The memory, especially for recent events, becomes impaired during the early stages Impairment of memory was noted in 38 per cent of my series, in 33 per cent of Hun and Prudden's series and in 65 per cent. of the London cases

Sleep, as a rule, is good, there may be an excessive somnolence (32 cases), especially in the daytime. In some cases insomnia may occur (14 cases) or the sleep may be disturbed by bad dreams or even actual night terrors (7 cases) The disposition is usually placid, though irritability is not uncommon (13 cases) Periods of placidity may alternate with periods of irritability There is often a morbid sensitiveness about the personal appearance with a strong desire for seclusion and a dislike for the presence of even the immediate members of the family Various phobias may occur, especially agoraphobia or fear of open places (5 cases) There is a marked tendency to suspicion and self-accusation, the suspicion is not one of conspiracy or intent to harm, but the patient has a fixed idea that all the world is finding fault with him and regards him unfavorably Some bemoan all their past sins, real or fancied Morbid impulses were present in 3 patients of my series Hallucinations and delusions of both sight and hearing, either alone or in combination, occur in many of the advanced cases (16 cases) Hallucinations of sight are most common Exalted ideas may be present Actual insanity occurs either in the form of acute or chronic mania, melancholia or dementia Melancholia was present in 9 of my series, in 3 with a suicidal tendency There was only 1 case of mania The patients in 3 of 13 cases seen by Allen Starr[32] were brought to him on account of some mental aberration Cases of myxedema are to be found in nearly every insane asylum, such cases of insanity usually terminate in convulsions, coma and death

SENSORY SYMPTOMS

Subjective—Abnormal subjective sensations are common Most frequently there is chilliness or a great susceptibility to cold, as was present in 59 of 61 patients in my series (96 7 per cent) It is very frequently described as a sense of a trickling of cold water on the skin, more especially down the spine Further, patients are usually brighter and more comfortable in warm weather Very commonly there is a sense of intense fatigue and languor on the slightest exertion (42 cases), so that the most trivial action assumes gigantic proportions and is dreaded by the patient. Various neuralgia pains in the muscles and joints occur These were present in 29 cases of my series, in 2 of which they were localized to the thyroid region Headache, especially occipital, is common (25 cases) Various paresthesiæ, as numbness, tingling, formication, itching, etc , are frequent and occurred in 30 cases Other less usual symptoms are vertigo (14 cases), syncope (3 cases) dyspnea on exertion (20 cases), palpitation of the heart (9 cases) and dysphagia (11 cases)

Objective—Cutaneous sensibility, as a rule, suffers no actual loss Delayed sensation has been more commonly noted, and in a few cases to a remarkable degree, yet allowance must be made for the slowness of response to stimuli, owing to the mental hebetude present In advanced cases actual anesthesia to touch and pain may occur, as was noted in 9 cases of my series In another 3 cases there was merely hypesthesia Hyperesthesia rarely occurs (2 cases) Hun and Prudden[10] found cutaneous sensibility diminished in 21, retarded in 10, increased in 4 and normal in 35 cases

MOTOR SYMPTOMS

Slowness of all the voluntary movements is very characteristic of the disease, and is rarely absent. There is often some clumsiness, especially in the performance of the finer movements, and there may be actual ataxia (12 cases) The gait is peculiar and almost characteris-

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[32] Med. News 1894 lxv

tic, being of a waddling, shuffling, lumbering nature, well described by Bramwell in the term "hippopotamus-like" (32 cases). Occasionally there is also an unsteadiness and staggering with a great tendency to fall, resulting in fracture of a bone or dislocation of a joint, as occurred with one patient in my American series.

Though actual paralysis is an accident, paresis of the various muscles is relatively common (34 cases). Weakness of the neck with falling forward of the chin on the sternum is often seen in adult myxedema just as in cretinism. Again, the head may fall backward between the shoulders with terrifying suddenness. There is a marked tendency to exhaustion after any prolonged or concentrated effort, and some patients are practically bedridden in the later stages of the disease, and even in the early stages find it impossible to walk a hundred yards or dress themselves without aid. In walking a quivering of the muscles may be seen, and actual tremor (3 cases) or muscular twitching (1 case) are not unknown. A case reported by Stewart[38] presented the interesting complication of tetany, and, as far as I know, is unique in literature. The superficial reflexes are sometimes diminished and in rare instances absent. The deep reflexes are usually stated to be normal, though Hun and Prudden[10] found them abnormal in more than 50 per cent. In my series they were noted as normal in 11, exaggerated in 5 and diminished in 6 cases. The electrical excitability of the muscles was diminished in at least 60 per cent. of the cases of Hun and Prudden. In my series it was noted as normal in 4 and diminished in 3 cases.

SPEECH AND SPECIAL SENSES

Speech.—Changes in the speech are very constant, and were present in 100 of 104 cases (96.1 per cent.) in the London series, in 104 of 107 cases (97.2 per cent.) in Hun and Prudden's and in 71 of 73 cases (97.2 per cent.) of my series. Slowness is the most marked feature, but inarticulation may be present to a slight degree. Actual aphasia is of rare occurrence. The speech is best described as deliberate, hesitating and monotonous. There is an apparent difficulty in getting words out of the mouth, as they stick at the lips and are only enunciated with a visible contortion of the mouth and lips. Yet, in spite of this difficulty, the patient is often garrulous and will talk for hours in the face of repeated interruptions. The quality or timbre of the voice is characteristically hoarse, thick, nasal or leathery as was noted in 39 of our patients. There is probably a nervous as well as a mechanical cause for this change in the voice and speech, the mechanical cause being the swollen condition of the mucous membrane of the larynx, soft palate, mouth and tongue, the nervous element being the slowness of cerebration and execution of voluntary effort.

Vision.—In a small proportion of the patients (16) dimness in the acuteness of vision was noted. Exophthalmos has been observed in the early stages, probably in association with a pre-existing Graves' disease. The examination of the fundi is usually negative, but there was optic atrophy in 3 of our series—neuroretinitis in 1 and sclerosis of the retinal vessels in 1. In a case of a young girl recently married, reported by Moffitt,[17] there was atrophy of the nasal side of both optic discs, with limitation of color vision in the temporal halves of both fields. Optic atrophy has been ascribed by Uhthoff and Moffitt to a possible association of an hypertrophy of the hypophysis cerebri.

38. Am. Jour. Med. Sci., 1889, xcviii.

Hearing.—Hearing was impaired in 25 of 32 cases (78 per cent.) in which this point was noted in my series. It may be unilateral or bilateral. In some it may be simply coincident, but in the majority it is due to the disease. Hammond[9] thought it might be caused by an actual diseased condition of the auditory nerves. Subjective auditory sensations, as tinnitus aurium, occurred in 6 of my patients and in the patient in Case 7 to a distressing extent.

Taste.—Taste is often impaired (9 cases). Perverted subjective sensations are also common (6 cases). A bitter, acid or metal-like taste may be constantly present. Taste was noted as normal in another 6 cases.

Smell.—Smell may also be impaired or perverted, as occurred in 7 out of 13 patients in whom this point was noted. Hun and Prudden[10] found that taste and smell were impaired in about 33 per cent. of their series.

CIRCULATORY SYSTEM

Temperature.—The temperature is nearly always 1 to 3 degrees (Fahrenheit) below normal when the disease is well advanced. In the early stages it may be normal or even one to two degrees above. In a well-defined case a temperature of 98 to 99 F. is an indication of fever. In 75 cases in my American series it was normal in 15 patients, subnormal in 58, slightly febrile (99.4) in one in whom the symptoms of myxedema had followed those of Graves' disease, and decidely febrile (102.5) in the patient with acute myxedema reported by Osler.[30] Of the subnormal cases there were 6 patients in whom it ranged between 93 and 96 and 15 between 96 and 97. In the London series there were 10 patients in whom the temperature ranged between 93 and 95. Hun and Prudden[10] reported a subnormal temperature in 90 per cent. of the cases and one case in which the temperature fell to 66 before death.

Pulse.—The pulse can be said to have nothing very distinctive, though in the majority of the cases it is slow and small or weak. Thus it was found to be below 80 to the minute in 35 and between 80 and 100 in 18 cases. In 3 of my cases the pulse was rapid, in two of which there was an associated enlargement of the thyroid gland, and in the third the course was one of acute myxedema.

Blood Pressure and Blood Vessels.—The blood pressure was said to be below normal in 3, normal in 1 and above normal in 2 cases. The heart was found to be normal in 54 per cent. of the London series and in 40 per cent. of Hun and Prudden's cases. The latter found cardiac hypertrophy, aortic accentuation or a reduplication of the heart sounds in a considerable number of cases. In long-standing cases the heart is said to become weak from myocardial degeneration. It is important to remember that in these cases the cardiac degeneration does not improve as rapidly under thyroid treatment, as the general condition and an unusual effort may lead to sudden fatal syncope. Cases of this accident have been reported by John Thomson and Murray. The condition of the heart and vessels was not specially studied in my series. In 2 cases, however, cardiac hypertrophy was noted. There is no special tendency to arteriosclerosis, it was noted only once in my series. The capillaries on the face are usually dilated.

Blood.—The blood shows usually early in the disease a mild secondary anemia, with consequent slight pallor of the mucous membranes. This disappears as the general condition of the patient improves. Hun and Prudden[10] found that in about 70 per cent. of 17 cases there

Albumosuria—This occurred in one of my series, a case reported by Fitz,[35] in which from 25 to 12 per cent of albumin was demonstrated by the usual tests von Jaksch has also reported a similar case

Sugar—Lorand, in his recent monograph on glycosuria, points out that in myxedema, unlike exophthalmic goiter, diabetes is a rarity A few cases have been reported in which a true diabetes mellitus occurred in the course of the disease In 1895 Ewald[39] reported the history of a woman, aged 55, in whom a cure of the myxedematous symptoms by thyroid extract was followed by a mild glycosuria In my series in one case reported by Osler,[30] in 1899, and previously referred to, there was a glycosuria complicating acute Graves' disease associated with myxedematous symptoms

In infantile myxedema, diabetes has also been reported Gordon[40] has published the histories of two brothers who were congenital cretins, in whom glycosuria developed and was benefited by the administration of thyroid extract Strasser,[41] also of America, has more recently reported a remarkable case of a congenital cretin who, after 4 weeks' intermission from thyroid treatment, developed a marked polyuria and glycosuria, with all the symptoms of diabetes mellitus

It must also be recognized that glycosuria may in rare instances develop after the prolonged or excessive use of thyroid extract, when a condition of hyperthyroidea, analogous to that of exophthalmic goiter, may occur Bottman found that 55 per cent of 20 patients with maladies other than myxedema developed a temporary glycosuria under the experimental administration of thyroid extract. On the other hand, Scholz, among 100 cases of cretinism, was unable to produce by thyroid administration a single case of even alimentary glycosuria What is the significance of diabetes occurring in the course of myxedema? Pineless and Strasser both point out that in the course of myxedema functional or even anatomic changes in glands other than the thyroid, as the pancreas, for example, may supervene

DIAGNOSIS

The diagnosis of myxedema can almost be made at a glance, the clinical picture being pathognomonic The solid edema with the characteristic facies, the condition of the skin and the hair, the mental hebetude, the slowness of thought, speech and action, the subnormal temperature, all form a train of symptoms that can not be mistaken for anything else

OBESITY

If the condition be thought to be one of obesity, the therapeutic test of the exhibition of the thyroid extract can be resorted to

BRIGHT'S DISEASE

Three of the cases in my series were mistaken for this In chronic nephritis the edema is in the dependent portions of the body and is determined by gravitation, or it appears where the tissues are loose, further it pits markedly on pressure The skin is thin and smooth and glossy The complexion is pale in striking contrast to the hectic flush of myxedema Lastly, the urine always shows signs of more or less serious renal disorder

TROPHEDEMA

Trophedema or "dystrophie edémateuse" may offer more difficulty This condition has been well described by Meige,[42] Rapi,[43] Hertoghe[43] and other French clinicians It is characterized by the appearance of a white, firm, painless edema occupying one or more segments of one or both of the upper or lower limbs (preferably the latter), persisting throughout life without appreciable prejudice to health It may be familiar, hereditary or even congenital Sometimes it occurs sporadically Occasionally there is disturbance of sensation Trophedema is probably of nervous origin and is analogous to muscular dystrophy In America, Ruhräh[44] reported the case of a girl with myxedematous-like swelling, which the author now believes can be best described as trophedema

DERCUM'S DISEASE

Dercum's disease,[45] adiposis dolorosa, can be distinguished, first, by the presence of large, irregularly distributed, fatty tumors which are painful and very tender, secondly, by the sensitiveness of the nerve trunks, and, thirdly, by the reaction of degeneration on electrical stimulation of the muscles The absence of sweat, the headache and the mental changes simulate myxedema very closely

PERNICIOUS ANEMIA

Myxedema has been mistaken for pernicious anemia, owing to the prostration, diarrhea and mental lethargy The absence of the characteristic blood picture and the chronicity of the course should clear up the diagnosis

COURSE OF DISEASE

The course is generally slow and progressive, often lasting for years The average course for cases in my series was 5 years and 9 months Twenty-five lasted 10 years or more, the longest case being 15 and 16 years, respectively Murray found that the average duration in 248 women was 7 years and in 32 men nearly 6 years Sometimes, even in the absence of thyroid treatment, periods of improvement occur, suggesting an arrest of the disease

MODE OF DEATH

In a certain number of cases death is the direct result of the myxedema either from general physical or nervous exhaustion, severe anemia, coma or mania In a few cases cerebral or cerebellar hemorrhage has been the cause of death The majority of patients however, die from some intercurrent affection as tuberculosis, pneumonia, nephritis or pericarditis Hun and Prudden[10] found the cause of death to be exhaustion and pericarditis, each, in 1 case, coma in 6, and pneumonia in 4 cases In my series there were 10 deaths, of which the mode was not stated in 2, coma in 2 cases, asthma, sudden syncope, pneumonia, purulent bronchitis, edema of the larynx, each, in 1 case, and glycosuria melena and mania in another case

TREATMENT

GENERAL HYGIENIC

An important element in the treatment is the maintenance of body warmth, which is best secured by moving to a warm climate and by the wearing of warm clothes The bowels must be regulated and a good, nutritious diet provided

MEDICINAL

Until 1893 a great many different drugs were advised, and, as is always true when such is the case, none of

39 Berl. klin Wochschr 1895 xxxii.
40 American Medicine 1904
41 THE JOURNAL A M A 1905 xliv
42 Nov Iconographie de la Salpêtrière 1899 xii.
43 Ibid 1901 xiv
44 Maryland Med Jour 1897 98 xxxviii
45 Am Jour Med Sci 189_ civ

them were of especial value Various tonics, as iron, quinin, hypophosphates were tried Diuretics and diaphoretics were also used Jaborandi and pilocarpin given over a long period of time have in some cases proved of benefit, depending, according to Davies,[46] not on their action on the skin, but on their tending to increase the secretion of the thyroid gland Nitroglycerin and a host of other remedies had their day

THYROID THERAPY

Byrom Bramwell[47] says it is no exaggeration to say that the cure of myxedema by thyroid treatment is one of the greatest therapeutic achievements of this or of any other age

As early as 1883 thyroid grafting was performed by Kocher, and later by Bucher, by transplanting the gland of a sheep into the tissues or body cavities of the patient. But it was found that the gland was soon absorbed In 1890 von Eiselsberg noted that the transplantation of the thyroid gland from an animal to a patient would prevent the development of cachexia strumipriva in cases in which a complete thyroidectomy had been performed In the same year Victor Horsley independently of von Eiselsberg suggested the procedure for a patient suffering from myxedema But all met with the same fate until MacPherson on one occasion succeeded in transplanting the gland of a sheep into the subcutaneous tissues beneath the breast where it became vascularized and functionally active, so that the patient was free from all symptoms three years later This method is unquestionably the ideal treatment, and Victor Horsley has recently advocated its trial in cases of postoperative myxedema, having previously instituted a course of thyroid therapy until all the symptoms have disappeared, when the transplantation can be attempted with more hope of success In 1891 Murray[48] of Newcastle first used with great success hypodermic injections of the glycerin extract of the thyroid gland of the sheep In the following year Howitz of Copenhagen, and Fox and Mackenzie of England found that the exhibition of the thyroid gland by the mouth was as efficacious The gland may be given raw or lightly cooked in doses of one-eighth of a lobe to one lobe of the sheep's thyroid once a day The liquid glycerin extract may also be used, of which 90 minims correspond to one gland, hence the dose varies from 3 to 20 minims The next advance was the preparation of the dry or desiccated extract, which has been put up in powder, pill or tablet form Of all the preparations the tablet is the most convenient and keeps better, hence is the most efficacious Parke-Davis, Armour and other firms have their own tablets The Burroughs and Welcome tablets from England are probably the most reliable

Rules for Administration—The first thing to determine is the most suitable constant daily dose of the drug this can only be done by trial and must be determined for each case It is best to begin with a small dose (one five-grain tablet or two grains of the extract) once a day, and gradually increase in frequency and in amount until the symptoms begin to subside This stage of the treatment has to be carried out with great care in all cases in which the disease has lasted for some years, in the aged and in those who show any indication of arterial or cardiac degeneration

Murray[11] says "The patient should be kept at rest in bed for a time so that as little strain as possible may be thrown on the heart and arteries" Sudden death has been reported in such cases following sudden over-exertion (as occurred in Case 78 of my series) The duration of the first stage of the treatment should be from 6 to 12 weeks for the advanced cases Any undue acceleration of the pulse, as an increase of from 10 to 20 beats a minute, indicates over-dosage. Further, a rise of temperature of one degree above normal, vomiting or purging are also danger signals of thyroid poisoning Extreme prostration, headaches sweating and irritability are some of the other indications of the toxic effect of the drug, which in many ways are remarkably similar to the toxic symptoms of exopthalmic goiter in which one also has a condition of hyperthyroidism

In my series of 76 cases, over-dosage was noted 13 times In one patient a very great intolerance to the drug was experienced, at first even one grain a day caused a marked systemic disturbance. After 6 to 12 weeks of this first stage the frequency of the dose may be reduced The minimum dose has also to be determined by trial Many find one tablet a day necessary, while others are free from symptoms with one tablet every two or three days If the extract be discontinued for any time there is a return of the symptoms as occurred in 3 cases of my series

Effects of Thyroid Treatment—The first effect noticed is the rising of the body temperature to normal Next there is a gradual or even sudden diminution in the subcutaneous edema with a consequent loss in the body weight Loss of weight was noted in 24 of my cases, and varied greatly in different cases, in 12 patients it was 20 pounds or over, in 4 of whom there was a loss of from 35 to 60 pounds in from 3 to 16 weeks Ord[25] belives that during the disappearance of the edema some important metabolism of a nitrogen-containing substance occurs There is also a restoration of the secretion of the skin which becomes moist and soft and loses its harsh, dry, roughened character Very frequently the old skin is desquamated in the form of large flakes until an entirely new epidermis is exposed The hair begins to grow in the form of a fine thick crop over the scalp, pubes and axillæ The menses return to their normal regularity and quantity The urine is sometimes considerably increased in amount, as was noted in two of my patients, and the albuminuria and cylindruria disappear The anemia, however, may not clear up, nay more may be increased and be accompanied by the appearance of a true edema of the feet Both these, however, usually disappear in a few weeks when the patient gains his normal strength With the physical improvement there is a corresponding improvement, *pari passu*, in the mental and nervous symptoms In some cases actual insanity has been cured The expression brightens, the mind becomes active and the patient begins to take an interest in his or her environment and will shortly return with zest to the daily routine of life When such a change in the bodily and mental condition of the patient occurs in a few short weeks, one is almost forced to conclude that the day of miracles has not passed

Parathyroid extract has been tried by Hutchinson[49] of London in myxedema without benefit, though in experimental work with dogs no myxedematous symptoms occurred unless the parathyroids were removed along with the thyroid glands Protonuclein and a

46 Internat Clinics 1893 III
47 Clinical Studies 1903 I
48 Brit Med. Jour 1891 II

49 Ibid 1896 I

preparation known as "thyroid-colloid" were tried in one case each, but without any apparent success

PROGNOSIS

The prognosis in the untreated cases is most unfavorable Of 64 cases that were followed by the London committee actual recovery occurred only once in a case of two and one-half years' duration Hun and Prudden[10] found only 2 cases reported to have ended in complete recovery without treatment, and in both the diagnosis was questionable

In 2 cases reported by Kohler due respectively to syphilis and actinomycosis of the thyroid gland the patients have recovered under potassium iodid In but few diseases has the outlook been so materially altered by the discovery of a specific drug, as has myxedema by the introduction of the thyroid treatment. Formerly the course was progressively downward and the ultimate termination was invariably lethal Since the introduction of thyroid therapy, however, if treatment be commenced early and if there be no complications life should not be appreciably shortened In severe cases of long duration in which the stage of shrinking in the gland has far advanced the outlook is not so good Advanced cardiac or arterial degeneration is a source of great danger and thyroid treatment has in such cases been followed by death If cylindruria or albuminuria or both persist in the urine after thyroid treatment, the prognosis depends on the extent of the kidney involvement

In my series of 100 the result was given in 95 cases It was thought better for the sake of comparison to divide the cases into two groups The first group includes the cases treated by medical means before the introduction of the specific therapy, and the second the cases treated since the value of thyroid extract has been appreciated In Group 1 there are 19 patients with 5 deaths, 10 unimproved and 4 said to be improved The mortality was therefore 26 3 per cent In Group 2 there were 76 patients with 5 deaths, 2 unimproved, 9 improved, and 60 cured It is but fair to add that of the 5 patients who died, in one the diagnosis was made too late for treatment, a second had acute myxedema a third showed tuberculosis of the adrenals at autopsy and a fourth died from a sudden syncopal attack during the thyroid administration In only one case did the patient succumb after a prolonged treatment of four months It would seem permissible therefore, to omit the first two of these cases, making 3 deaths in 72 cases or a mortality of 4 1 per cent a rather remarkable drop from 26 per cent of the first group Of the 2 unimproved cases, no data were given in one case and in the second the patient was treated for but six weeks with a preparation which was in all probability not the thyroid gland

Of the 9 patients who were reported improved, one was treated by homeopathy, two were reported before any marked result could be expected, a fourth was well physically but not mentally Of the remaining 5 either the data are scanty or the diagnosis seemed more or less questionable Sixty patients out of 76 (79 per cent) were completely cured

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Epileptic Colonies—The epileptic colony is a success It has been shown to be a great public economy the fruit of good statesmanship—H T Patrick, M D in *Charities and the Commons*

SOME PERSONAL EXPERIENCES IN THE USE OF ELECTRICITY IN OPHTHALMIC PRACTICE *

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CHICAGO

This report will be limited by request to the use of the galvanic and the form of alternating current known as the sinusoidal That the subject of electricity in ophthalmic practice has received scant attention appears from a statement by the secretary of this section, Dr Bulson "For several years the subject has received no consideration In 1898 Dr Starkey read a paper on 'The Use of Galvanism in Pterygium,' and Dr LeMond on 'The Value of Faradism in Choroiditis' Since then nothing has been presented except some papers on the galvanic cautery and the magnet"

It is probably safe to say that there is no remedy which causes so varied physiologic manifestations and therapeutic results as electricity By proper selection of modality, current strength, tension, polarity, length and frequency of application, etc, stimulation or sedation of the nervous and vasomotor systems, muscular contraction, decomposition and destruction of tissue, changes in nutrition and so forth may be produced This "proper selection" requires a fair working knowledge of the physics and electrotherapeutics of the agent Ranged on the side of "working knowledge" will be found those (conspicuously neurologists) who are securing recoveries by electric agencies, and have an enlightened faith in still greater future conquests, while, on the side of those who lack this knowledge, are conspicuously ophthalmologists who frankly admit this lack, neglect almost completely the use of electricity, and look askance at electrotherapeutics as the real means of recovery from disease which may have previously resisted the classically authoritative drug habit, and prefer to attribute the result to suggestion, coincidence or the bogey man

Of all the modalities, galvanism furnishes the greatest variety of useful application to the eye as well as the rest of the organism, while, with the possible exception of radiotherapy, it requires the most skill for its safe and successful administration

For the most part I have used electricity in chronic cases which are very intractable or usually considered not amenable to medication In order that results may be properly referred to the current, the diagnosis, when possible, has been confirmed by confrères, other treatment avoided, and in several instances patients had been treated without success by the usual approved methods for long periods

The cases embraced in this paper are taken from my records, without selection, except to include those treated for a sufficient time to warrant a fair conclusion as to the possibilities of the remedy For the sake of completeness brief mention will be made of cases previously reported

A word in regard to the nature and selection of the current used, and the technic of its application

Previous to 1890 the galvanic battery of zinc-carbon elements, excited by a solution of potassium bichromate, was used, and since then the Edison street current, controlled and measured by the rheostat and meter of the ordinary wall plate

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* Read in the Section on Ophthalmology of the American Medical Association at the Fifty seventh Annual Session June 1906

The alternating or sinusoidal current has been taken from a No 2 Victor transformer, using from 30 to 35 measured volts and a quantity estimated at 5 milliamperes As the heat meter is not applicable to so small a quantity, it was thus estimated With a force of 30 volts taken from the direct current, and the electrodes placed on the lids and the nape of the neck, the meter registered 5 m a, hence, with the same voltage from the alternating current and the same resistance the current is 5 m a

PHYSICAL CHARACTERISTICS OF THE GALVANIC AND SINUSOIDAL CURRENTS

The maximum voltage of the No 2 Victor transformer is 70, and the milliamperage probably 1,000 The maximum speed is 2,800 revolutions a minute, and the alternations 5,600 While the current alternates, the sinusoidal wave is unbroken or continuous Figure 1 represents the wave, Figure A, the galvanic

In the absence of any tracing of the wave from the dynamo, I am not convinced that it is perfectly sinusoidal Still, it is probable that a similar therapeutic effect may result from a wave that lacks its perfect symmetry The galvanic current is used when its electrolytic property is desired to separate chemically the elements of a pathologic body, and when its polarity may be utilized as a sedative or a stimulant to the muscular, vascular and nervous tissue For example, in consecutive optic atrophy galvanism is especially indicated, on account of the existing exudates, while in primary atrophy I much prefer the alternating current, as it ap-

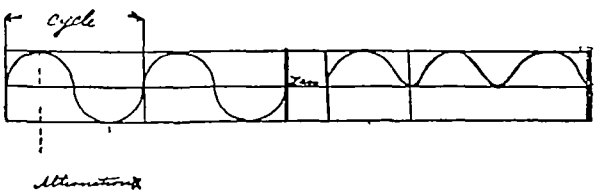

Fig 1 Fig A

pears to be more stimulating to the nerve the greater reaction of which is evident by the more intense light flash produced

This can be shown by comparing a thirty-volt current from the dynamo with a thirty-volt galvanic current The former is not unpleasant and causes a brilliant mosaic of dark and light, while the latter causes no phosphenes unless the current is interrupted and the burning is so intense that it can not be endured for more than a half minute

The almost universal opinion that the alternating current has no electrolytic effect seems at least doubtful A current of thirty volts causes as much decomposition of water as one of 5 m a from the galvanic, and potassium iodid in solution is readily decomposed, although with an equal amount of discoloration at each pole

Since the exposure of the eye to the static, high-frequency, *x*-ray or faradic current causes no phosphenes, such currents probably have very secondary if any value in optic atrophy The technic is as follows except when otherwise stated Galvanism is generally applied with a large positive pad, 3x4 inches (to prevent smarting) to the nape of the neck and the negative pads to the closed lids for ten minutes daily, with a current of from 5 to 10 m a generally the latter Since changing a Schulmeister (German) motor for a Victor (Chicago) only 3-5 m a have been used as the limit of tolerance The electrodes of the sinusoidal are similarly placed and from 30 to 35 volts as can be tolerated, used for ten minutes daily

Fourteen cases are fully reported in the *Annals of Ophthalmology*, July, 1898, and are omitted here

CASE 15—Central retinitis, unimproved

CASE 16—Paresis of r inferior and internal recti and of the sphincter pupillæ Recovery

Patient—Feb 11, 1902 W F S, aged 35 clerk Seven weeks previously he lost consciousness for four days during which time the right arm and leg were paralyzed He then recovered consciousness and the use of the arm and leg Three weeks later diplopia was noticed this was increased by looking to the left and down R hypertropia, 5°, exotropia, 15°

Treatment—Interrupted galvanic current 5 m a negative pole to lids, positive to neck, for ten minutes daily

February 20 exota 8° P hyperta 3° April 2 exota 1°, R hyperta 2° April 26, orthophoria Binocular field of fixation normal

CASE 17—Amblyopia exanopsia R E V improved from 6″ to 2

Patient—April 12, 1902 J P S aged 37 printer The right eye has diverged since childhood V R F is now about the same as it has always been, he can see the tips of the fingers at 6″ Fundus appears normal

Treatment—The sinusoidal current to the eye ten minutes daily Feb 12, 1903, he can distinguish thumb from fingers at 6′ He is much pleased with the result as he can now see objects approaching from the right side, which enables him to get about the streets more safely

CASE 18—Bluish white atrophy of left optic nerve, slight improvement from light perception

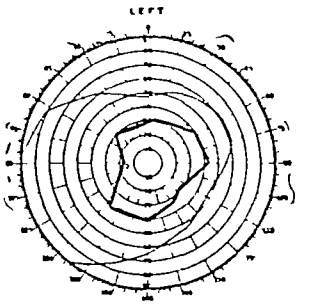

Fig 2.—Case 19 Feb 3 1903

CASE 19—Retinitis pigmentosa P E —1 00 15° = 20 80, improved to 20/40 L E, —1 25 16° = 20 80 not improved (Fig 2)

Patient—Jan 29, 1903 Dr A B, aged 48 had good sight until an attack of measles in childhood since then night blindness has prevented him from going out in the evening and vision has been steadily failing During the past seventeen years reading or fatigue caused a pain from the frontal to the occipital region, which glasses have considerably relieved Fundi Bars and plaques of pigment infiltrated along the peripheral retinal vessels Family history good No history of consanguineous marriage

Treatment—Sinusoidal current to the eyes daily On March 2, 1903, there has been no pain in the eyes since treatment

CASE 20—Amblyopia exanopsia P I improved from 20/120 to 20 80

CASE 21—Sequelæ of specific relapsing iritis V P I improved from ability to count fingers at 10 to 20 200 I I from light perception to 20/70

Patient—Feb 2 1904 A N N aged 42

History—He had a chancre two years ago in May, 1902 five months later the left eye was attacked with iritis and seven months later the right Vision had been good previous to the attacks He was under the care of an oculist for five months beginning a week after the attack in the left eye Hydrar[illegible] and potassium iodid were prescribed [illegible] iodid of potassium up to the [illegible] with the [illegible] eye h[illegible] left h[illegible]

Second Attack—This occurred August, 1903, in the right eye, and continued two months without treatment Vision has remained as at present during the past three months R E V = counting fingers 10′, L. E has light perception. Under atropin Pupil of R E 3 mm, pupil of L. E 2 mm Fleecy opacities in each vitreous Retinal vessels and discs invisible In fixation at 6″ the left eye diverges

Treatment—Galvanism ten minutes daily, the negative pole to the nape of the neck and the positive to the lids

March 7, 1904 R. E V = 12/200, L = 20/200

April 4, 1904 R. E V = 15/200, L = 15/120 The sinusoidal current to the eyes Galvanism discontinued

April 19 R. E V = 15/120 Discontinue sinusoidal current to the eyes and apply vibratory pneumatic massage with eye cups to eyes daily for five minutes

May 2 Vision the same Discontinue massage and apply the high frequency current from coil and Oudin resonator with vacuum electrodes to eyes daily for ten minutes

May 13 Vision remains the same Discontinue the high frequency current and apply galvanism Dionin 5 per cent daily for five days, then omit it for two days, and repeat

Oct 6, 1904 R. E. V = 20/200, L E V = 20/70

Case 22—Double optic atrophy, probably of cerebral origin. V R E improved from light perception to 20/67 V L E from 20/120 to 20/20

Patient—Oct. 3, 1903 L. W, aged 12, school boy, suffered from very severe headache, vomited about twice a week and was very delicate from the age of five to ten He has been in good health during the past two years On returning to school September 9 he noticed that he could not see figures well on the blackboard, and for a week past has had to read with his book very near his eyes

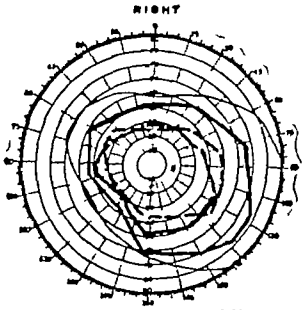

Fig 3—Case 22 April 25 1904 White — blue — —, red — —

Examination—Skiascopy R E + 1 00, L. E — 0 50 Ophthalmoscopy R E very white marginal band with gray center of disc, vessels normal L. E opaque white disc, white atrophic choroidal patch to the nasal side of disc and two-thirds its size, vessels normal (Fig 3)

Treatment—Sinusoidal current

October 23 R. E V = Light perception, L = 20/80

November 20 R E counts fingers excentrically at 6″, L. E V = 20/80

Jan. 7, 1904 R E V = 15/200, L E V = 20/30

February 4 R. E V = 20/120, L. E V = 20/20

March 7 R E V = 20/80, L E V 20/20

April 25 R. E V = 20/70, L E V = 20/20 The papillæ appear as white as when first examined Treatment discontinued

Feb 13, 1906 R E V = 20/50, L. E V = 20/20

Case 23—Xanthelasma electrocuted

Patient—Jan 18, 1904 Mrs A. R J, aged 37

History—Four years previously three yellow patches appeared on the lids, one below the right inner canthus, one below and one above the left. They are at present ⅛″ by ¼″ in size.

Treatment—Hypodermic cocain Negative galvanic needle beneath the left upper patch, 3 m a, gradually increased to five for four minutes and this repeated with the needle at right angle to first insertion There was no pain

January 30 Patch absent, a small crust present Needle used as above on the remaining patches

February 20 and April 21 Needle again used

May 21 Patches absent

Case 24—Tobacco and alcohol amblyopia Double optic atrophy V R. E improved from 6/100 to 9/100 V L. E. improved from 4/100 to 9/100

Case 25—Optic atrophy from wood alcohol V R. E. ½/100, L E, 1/100, decreased to ability to count fingers

Later this patient, supposed to suffer from inhalation only, says he drank wood alcohol, supposing it was ordinary alcohol

Case 26—Impaired vision and headache relieved.

Case 27—Intraocular hemorrhage in right eye, with only light perception, unimproved by three months' previous treatment. Recovery, with normal vision

History—May 22, 1904 Dr A. S, aged 39, was taken ill on March 4, 1904, losing consciousness, and on recovering it two days later found that he could only distinguish light His memory, hearing, and sight remained bad for a week, and then he recovered Ten days later he had pain in the left eye in the evening, and the next morning both eyes became again blind Nine days after the first attack the three oculists consulted agreed in a diagnosis of hemorrhage in each vitreous Later he consulted four oculists, three of whom agreed with the above diagnosis, while one considered the case choroiditis, with exudates Under treatment the left eye recovered normal vision, while the right eye has only had light perception since the second hemorrhage

Previous treatment consisted of pilocarpin injections, atropin and dionin, and subconjunctival injection of cyanid of mercury (once) Electricity had not been suggested The consultants agreed that the vision of the right eye is hopelessly lost Leucocythemia and acute toxemia had been diagnosed

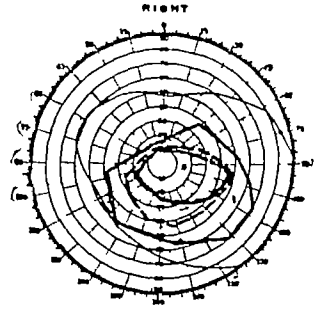

Fig 4—Case 28 Feb 16 1905 White —, blue — — red — —

Examination—R. E has only perception of light, with dilated pupil the mirror gives no fundus reflex L E V = 20/20, notwithstanding a considerable amount of fluffy vitreous opacity

The patient was advised to try galvanism and referred to his oculist, who handed him over to me

Treatment—Galvanism with cathode to right lids and current gradually increased from three to ten m a, for ten minutes daily After four days fingers could be counted to the right, and four days later in the whole field

June 7 R. E V = 20/67

June 25 R E V = 20/40, temporarily He now has annoying diplopia with divergent strabismus, but is assured that this will disappear if vision becomes normal In April treatment was discontinued.

September 4 R E V = 20/25

May 11, 1905 R. E V 20/20, intermittently = 0 5 (S) at 12″ There is no diplopia Binocular fixation in reading Convergence = 10 m a

Feb 14 1906 R. E V = 20/20 fluently = 0 5 (S) at 14″ Vision somewhat clouded by a considerable amount of dust and string opacities in the vitreous The details of the fundus are distinctly seen and appear normal except as above stated Advised to renew galvanic treatment

Case 28—Amblyopia (hysterical?) R. E V = 20/200, improved to 20/25, L. 20/100 to 20/25

Patient—Feb 15, 1905 Mrs J F, aged 44, has never had good eyes

History—Five years ago, glasses + 2 25 for distance and + 3 50 for reading were prescribed. Her sight has been failing for nine years She does not remember the time when she could read without a very good light. (Fig 4)

General Health—She has had more than a dozen voluntary abortions In 1904 she had two miscarriages without severe hemorrhage, and without affecting vision. Three years ago her sight failed very much after the loss of her husband, by accident, and since then she has been subject to heat flashes and profuse sweating hourly in the day and often in the night, accompanied by palpitation.

R. E V = 20/200 + 1 75 + 0 50 180° = 20/200 better, L E. V = 20/100 + 1 75 = 20/100

Treatment—Sinusoidal current to eyes and general electrization with the auto-condensation couch ten minutes daily

March 2 R E V = 20/100, slowly, L E V = 20/30 The eyes feel stronger The flashes, sweating, palpitation and nervousness are very much less

September 21 R. = 20/50, L = 20/25 This morning she lost the sight of the right eye for an hour

Feb 10, 1906 R. E V = 20/25 — 2, L. = 20/25+ At times she can not see to read, and again sees only the left side of words

CASE 29—Paresis left internal rectus, improvement

CASE 30—Double specific choroiditis with vitreous opacities R. E V 20/70, improved to 20/50, and asthenopia relieved. L. E V 20/20

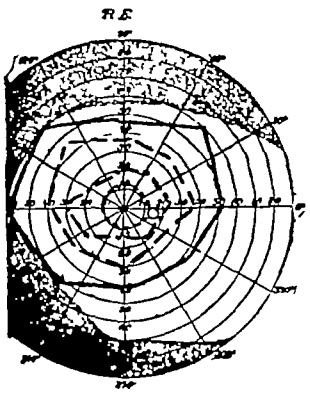

Fig 5—Case 39 Feb 13 1901 White——, blue — — — ; red — — green - -

CASE 31—Right optic atrophy No improvement L. E V 20/33, improved to 20/20

CASE 32—Xanthelasma Removed by electrolysis and excision

Patient—Jan 7, 1903 Mrs C, aged 36, has four yellow patches, two above and two below each inner canthus

Treatment—The negative galvanic needle, 5 m a., completely removed one patch 2 in diameter in one sitting The current was turned on rapidly (without previous anesthesia) and the pain was so severe the patient would not consent to have even a hypodermic needle puncture for further electrolysis, hence the three remaining patches were excised under chloroform

CASE 33—Opacities in the vitreous L. E V improved from 20/70 to 20/40 and epiphora relieved

CASE 34—Sequelæ of iritis V R. E counts fingers at 8, improved to 6/50 V L. E fingers at 3', improved to seeing fingers at 10

Patient—June 5, 1900 Mrs J B, aged 55, has had repeated attacks of iritis during the past eighteen months

Examination—R. E: Pupil semi dilated and irregular floating opacities in the vitreous and capsular opacity L E Vision failed years ago There is a large capsular opacity Pupil normal size

Treatment—Galvanism 5 m a ten to fifteen minutes daily

June 22 Twelfth treatment, R E. V = 6/50 L. E V = fingers at 10"

CASE 35—Alopecia of the lids Improvement

CASE 36—Amblyopia. Left eye Vision improved from 20/120 and 3 00 (S) to 20/80 and 2.25 (S)

CASE 37—Asthenopia Relieved by glasses and galvanism

CASE 38—*Pterygium tenuis, right eye unimproved*

Patient—April 25, 1901 P V, aged 29

Treatment—Bipolar galvanic needles were used under the pterygium with 4 m a for two minutes

July 18 The pterygium the same The positive needle applied under the pterygium, 2"' from the cornea, 2 m a for two minutes

August 8 Positive needle twice inserted under the growth with 2 m a for two minutes This procedure repeated August 15

September 17 The pterygium appears the same as before the first needling

CASE 39—Optic atrophy and retinitis circumscripta Vision in each eye 15/200, improved to 20/50

Patient—Dec 12, 1901 T L S, male, aged 54

History—His sight began to fail in February, 1900, when ill with fistula in ano, and it has gradually failed, so that for the last two months he can not read the paper

Examination—Fundi. R E The disc is bluish white and blurred on the nasal edge There is a wash leather colored stippling in the macular region

L. E The disc is similar to the right There are white and red dots in the macular region and also two diameters of disc up and in a similar infiltration Color vision He can only distinguish blue (Fig 5) General health The fistula

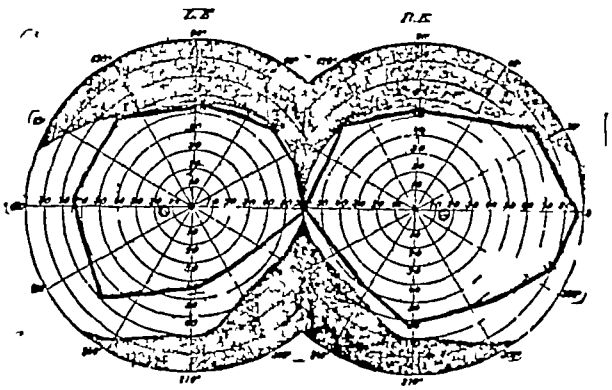

Fig 6—Case 41 Oct. 10 1901

was operated on and his health is now good He is subject to chronic rheumatism

Urine Normal

Since a year ago last October he has smoked one half dozen cigars daily (more than usual) and chewed one ounce of tobacco daily up to July 1, and has not used it since He does not take stimulants One daughter died from tuberculosis and one from traumatic spinal meningitis He lost two uncles from phthisis

Treatment—Sinusoidal current applied to the eyes daily

Jan 14, 1902: R. and L. V = 20/200 Mercury and potassium iodid internally Sinusoidal current continued

January 23 R E V = 20/200 L V = 20/120 He reads a letter now which he could not do when he began treatment

February 18 R and L. V = 20/50 = 0 5" with reading glasses

CASE 40—Double amblyopia, ending in optic atrophy and blindness

CASE 41—Double primary optic atrophy Vision improved from uncertain counting of fingers at 6" to ability to read and to write her letters

Patient—Sept. 3, 1901 Miss F G, aged 36, school teacher

History—Six years previously she became very nervous on account of her inability to secure a certain position and vision began to fail first in the left, then in the right eye She noticed words run together and this was not relieved by glasses

Examination—Pupillary reaction to li[illegible] convergence

normal She confuses pink and gray with green, and blue with red

R. E Gray white opaque disc, reticulated at site of physiologic cup and sharply defined

L. E Disc similar to right, but not reticulated Retinal vesels normal (Fig 6)

General Condition—A few weeks before the sight failed she was thrown backward from a cart and hurt her back very much, but retained consciousness Her memory is particularly good She is subject to sick headache and is very nervous Patellar reflex is normal

Family History—Her father died of nephritis at the age of 61 Her mother is 68 and healthy She has two brothers and three sisters living A brother, 33 years of age, commenced to lose sight at 30 and can not see to read An oculist whom he consulted diagnosed optic atrophy and was unable to state the cause.

Previous Treatment—Six years ago she was under the care of a prominent oculist for a year in his private hospital in Cincinnati He diagnosed optic atrophy and prescribed strychnin hypodermically, baths, general massage, nitroglycerin and general faradism

Vision did not improve and remained about the same as it is at present, that is, she can count fingers uncertainly with either eye at 6″

Treatment—Galvanism daily to eyes

September 12 R. E V = fingers at 14′, L E V = fingers at 12″ She read the headlines of a paper for the first time in six years

September 30 R and L V = fingers at 24″ Sinusoidal current substituted for the galvanic The patient at this

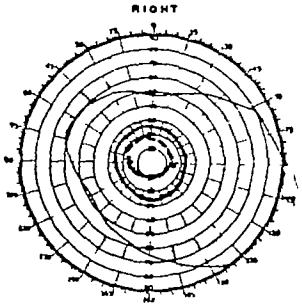

Fig 7—Case 41 Ap 11 8 1906 White —— red and blue — — —

date was exhibited at the Chicago Ophthalmological Society Dr Suydacker, who had recently studied four years in European eye clinics, remarked he had not seen so advanced a case of optic atrophy during that time

October 29 R E V = 1/80 = fingers 4, L E = 1/120 = fingers at 3

November 12 In fixation at 12″ the left eye diverges

Jan 27, 1902 R = 1/30 L = 1/80

February 10 Vision the same For some time she has been able to select her own letters from the mail and to answer correspondents At this date her newly found faith transferred her to the care of the so-called Christian scientists

CASE 42—Amblyopia (hysterical) R and L. V = 20 80 improved to 20/25

Patient—Dec 17 1904 M M male, aged 10 was referred to me by an oculist

History—He was sent from school two years previously on account of failing sight He had been treated for one year at an eye clinic but without improvement

Family History—His father and paternal grandfather died of apoplexy His mother died from exhaustion

Examination—R. Fundus Physiologic cup is three times usual size and the vessels emerge very near the nasal side of the disc

L. Fundus Similar to right The boy is exceedingly nervous The case has been diagnosed as hemeralopia without pigmentation but night blindness is not complained of and there is no degeneration of the retinal vessels The small field of vision without optic atrophy is characteristic of hysterical amblyopia, as is also a frequent diplopia

Treatment—Sinusoidal current tri weekly

March 1 R. = 12/10, L = 5/100

April 20 R = 8/100, L = 6/100 The fields are concentrically contracted to 20°

June 24 R. = 14/100, L = 10/100

November 28 R = 14/100, L. = 14/100 Repeat.

December 16 R. = 20/50, L = 20/67

Feb 15, 1906 R E = 20/30, L E = 20/30

April 7 R. or L V = 20/25

CASE 43—Traumatic optic atrophy V L E = light perception, not improved

SUMMARY OF CASES TREATED ELECTRICALLY

Optic Atrophy—Fourteen patients, 23 eyes In 5 eyes in which vision = light, 40 per cent were improved One to seeing hand movements and one to 20/67

In 18 eyes in which vision = form Sixty-four per cent were improved Four, 60 to 125 per cent, two, 300 per cent, three, 500 per cent, one, 1,500 per cent, two from seeing fingers to reading In six there was no improvement

Vitreous Opacities—Seven patients, 12 eyes In 5 eyes vision = light One improved to counting fingers at 6 inches, one was unimproved In 12 vision = form Ninety per cent were improved Seven, 40 to 100 per cent, one, 200 per cent, one, 1,100 per cent In one there was no improvement

Amblyopia—Seven patients, 10 eyes All were improved Four, 20 to 100 per cent, six 200 to 700 per cent

Sequelæ of Iritis—Two patients, 4 eyes All were improved One from light perception to 20/70, one, 100 per cent, two, 200 per cent

Intraocular Hemorrhage—One eye Vision improved from light perception to 20/20

Retinitis Pigmentosa—One patient, one eye Improved 100 per cent One eye was not improved

Retinal Thrombosis—One eye Vision was improved from fingers at 14′ to 6/15 and 0 5 at 12 inches

Sequelæ Central Retinitis—One patient two eyes No improvement

Asthenopia—Three eyes Recovered

Xanthelasma—Two patients Recovered

Paresis of Ocular Muscles—Two patients One recovered and one was much improved

Alopecia of Lids—One patient, improved

Nictitation—One patient Recovered

Pterygium—One eye No improvement

The recovery of cases Nos 1, 2, 21, 27, 41, 14 and 22 deserve to be emphasized as phenomenal, especially since in all except the last two, the patients had been previously treated without improvement

Thus, contrary to the contention of the erudite and lamented Noyes, and "most oculists" (Burnett) electricity does seem to justify its claim to usefulness in ophthalmic practice

DISCUSSION

DR LEARTUS CONNOR, Detroit, said that in general, as an experimental affair the use of electricity in therapeutics has been disappointing Most busy men dislike to take up so much of their time as is required for this treatment When the first wave of electricity passed over the country Dr Connor fitted himself out and began the use of electricity with the old apparatus At present, with the use of the street currents and the improved apparatus for transforming them into any kind of current desired it ought to be possible to get more definite results He has had great satisfaction in using electricity, not for gross pathologic lesions but in the treatment of the muscular and functional disturbances of the eyes He explains

the good results on the theory that obstruction to nutrition is removed and a more healthy activity promoted He has been disinclined to use electricity generally He has obtained good results from it in cases of glaucoma, before and after operation, in cases of iritis and in cases of discomfort that was not relieved by other means Dr Connor agreed with Dr Coleman regarding the necessity of definite methods in the use of electricity and said that he wished some one would tell just what changes are produced in the eyes by its use If we have to use this agent blindly, unsatisfactory results will be obtained The matter of idiosyncrasy has to be considered too, one case will be benefited, and another not at all. There is a wide field here about which we know very little and he hopes that some one will be stimulated to investigate the problem further

Dr. H. V Würdemann, Milwaukee, declared that the high tension galvanic current is of great value in securing absorption of exudates within the eyeball in cases of choroiditis, and of mild uveitis, and in securing stimulation of nutrition in cases of partial optic nerve atrophy and retinal atrophy In the first class of cases the positive pole is used to the eyeball, in the second of stimulation Dr Würdemann exhibited the visual fields of a case of rotary nystagmus with partial atrophy of the optic nerve and retina The visual fields were greatly contracted and visual acuity was reduced to 6/60 and 6/36 respectively After being treated by the interrupted galvanic current for three months they are nearly normal size, visual activity now is full 6/12, in each eye, nystagmus has disappeared.

Dr. Charles H. Williams, Boston, said that in order to have a current which is easily controlled and constant he had made a little apparatus which has given him a great deal of satisfaction. It consists of three parts In the center is a small motor run by the street current On one side this motor is geared to a generator producing a sinusoidal current, to the other side is geared a generator producing a constant current. By taking the alternating current through the core of an induction coil any strength of interrupted current can be obtained by the movement of the outer induction coil By altering the strength of the field in the constant current generator, a constant current of any desired strength can be obtained. In this way, from the street current an easily controllable current of any form may be obtained.

Dr. E. J Brown, Chicago, stated that he has used electricity in his practice and mentioned a case of monocular amblyopia in which he used it Fixation was perfect, but there was a high degree of refractive error in one eye and a low degree in the other The patient, a man, had worn correcting glasses for two years, and Dr Brown found the correction proper The man had tried it, however, for two years and the eye continued to be a disturbing factor After three weeks of treatment, three treatments a week, with the sinusoidal current the eye improved, vision came up from 20/100 to 20/40, and there was perfectly comfortable binocular vision.

Dr. S. Lewis Ziegler, Philadelphia, considered it very unfortunate that electricity, which is accomplishing so much in the field of general medicine, and particularly in neural therapeutics, is looked on with such skepticism by ophthalmologists The few who employ it successfully are enthusiasts, while the many are ignorant, indifferent, or else are rank agnostics He said that Dr Coleman evidently belongs to the class of enthusiasts and that he had submitted a liberal array of facts to substantiate his position. While endorsing most of the observations, Dr Ziegler differed somewhat in method The two fold action of the galvanic current (1) physiologic, and (2) physicochemical, manifested as electrolysis and cataphoresis, should be borne in mind in any endeavor to explain the various electric phenomena observed and the therapeutic effects obtained therefrom The anode or positive pole is sedative, and should be applied to all inflammations, while the cathode or negative pole is stimulating, and should be used for atrophy A notable exception to this rule is glaucoma in which the negative pole should be employed The rule can be modified as experience dictates The constant current yields the best results when the electromotive force is high and the amperage low Dr Ziegler generally uses from 60 to 70 volts, and from ½ to 1 milliampere The seance should last about ten minutes, daily or on alternate days Occasionally he gives a ten minute sitting of 1 m a, followed by a second ten minutes of ½ m a. Interruption of the galvanic current is useful in certain cases At times it is of value to combine the faradic current with the galvanic A higher amperage would require a lower voltage A stronger current than this would be so painful as to be unbearable

The eye is such a delicate organ that the apparatus used should be carefully adjusted for the most accurate measurement of these therapeutic currents, and the greatest precision should be employed in their application The polarity should be easily discernible and kept clearly in mind, as in certain diseases reversal of the current may be painful or injurious, and might mean ultimate blindness for the patient The milliamperemeter should have a secondary scale, graduated to read from zero up to 5 m a In addition to the volt controller placed on the main circuit there should be a small carbon rheostat to cut down the amperage Dr Ziegler employs the 90 volt shunt controller as arranged in the Keystone electric cabinet, with a secondary carbon rheostat, and a milliamperemeter in circuit with the patient The active electrode is constructed with a gold plated eye piece, which has proved superior to platinum, a long thin arm and a hard rubber handle that can be comfortably grasped by the patient The electrode must be well covered with a pad of moistened absorbent cotton, so that the positive current cannot drive the gold off by cataphoric action The indifferent electrode should be somewhat larger (2 to 3 inches), and is preferably made as a neck pad, the sponge being stitched on thick sheet rubber This should be moistened and placed inside the patient's collar, the rubber back having first been dried so as to avoid soiling the clothing As previously mentioned, the positive pole is indicated in inflammatory processes Thus, the protean forms of uveitis, whether acute or chronic, yield to the positive pole In plastic iritis, spongy iritis, iridocyclitis, and choroiditis, a marked shortening of the course of the disease will occur Serous iritis with keratitis punctata, often clears up in from 3 to 6 weeks, while under ordinary therapeutic measures from 3 to 6 months would have been required for convalescence. A case of sclerotitis was relieved from severe pain and photophobia after the first treatment The positive pole in this case had a decided bleaching effect on the flannel red eyes, and promptly dissipated the marked congestion The positive pole is also useful in retinal hypereathesia, and in retinitis pigmentosa, although in the latter disease a brief change to the negative pole, or to the sinusoidal current, often proves valuable It is occasionally possible to abort a chalazion, by applying the positive pole

Dr Ziegler has always used the positive pole for old, stationary, intraocular hemorrhages, while Dr Coleman employs the negative. Doubtless the therapeutic effect, said he, is the same, whichever pole is used He has seen hemorrhage in the vitreous, causing blindness for over a year, rapidly cleared up to useful vision In a recent case of subretinal hemorrhage in the macular region three months of alterative treatment had made no apparent impression on the deposit which still remained a bright red spot Vision which was 20/200, under positive galvanism showed immediate improvement, and in four weeks he was discharged with a vision of 20/20 and Jaeger No 2, all hemorrhagic pigment having been absorbed Vitreous opacities are especially amenable to this form of galvanism In a case in which, after about [illegible] weeks of alterative treatment with the iodide, vision was reduced to 8/200 and Jaeger No 20 the vision had increased in a few weeks to 20/40 and Jaeger No 2, under positive galvanism

The negative pole has a smaller therapeutic field but a no less valuable one It is most effective where an atrophic is indicated. Its greatest field of usefulness is in [illegible] atrophy It should be used in a great many cases [illegible] hemorrhage being carefully avoided. One of the earliest [illegible] was relieved to be [illegible] D [illegible] 20/[illegible] The application [illegible] Jaeger No 4 [illegible] a [illegible]

perception to 20/70 A case of toxic amblyopia from inhalation of the fumes of wood alcohol was restored to almost normal vision and fields after a year's careful treatment In glaucoma the negative pole will relieve pain and reduce the tension, while the positive will increase both Dr Ziegler was able thus to relieve a patient suffering from an attack of acute glaucoma and to prepare her for operation in about ten days Galvanization of the cervical sympathetic has also proved successful in this disease

He has tried the sinusoidal current in retinitis pigmentosa and in optic atrophy, but is not overenthusiastic as to the results obtained He is sure, however, that it has a future, which only needs to be developed.

Electrolysis is, of course, a most valuable therapeutic measure In trichiasis it is the only successful epilating agent The needle is placed at the negative pole and the neck pad is made the positive It is valuable to shrink up small tumors In trachoma the bipolar needles will give the best results In ectropion and angiomata Dr Ziegler prefers galvano caustic puncture He has used corneal electrolysis for leucomata, for powder marks and for corneal ulcers with considerable success He has modified Alleman's electrode by making the tip convex instead of concave and applying it directly to the surface without the intervention of a drop of mercury Cataphoresis, or the driving of medicaments into the ocular tissues by the positive current, should prove to be a valuable measure In a patient where a heart lesion contraindicated etherization Dr Ziegler enucleated an eyeball under a cataphoric application of 20 per cent cocain for twenty minutes without the patient suffering much discomfort

Dr Ziegler concluded by saying that the evidence should convince every careful and unbiased observer that electricity deserves a most honored position in ocular therapeutics

DR. GEORGE F KEIPER, Lafayette, Ind, stated that he has tried all kinds of eye electrodes and has found that the best electrode is the human finger By passing the current through his own body and out through the finger to the patient's eye, the physician will not hurt himself or the patient and will avoid any prejudice the patient may have against the use of electricity

DR. W F COLEMAN, Chicago, said that his cases were chronic ones and he wished to get electrolysis, which is not in proportion to the voltage, but to the milliamperage In opacities in the vitreous, for example, he uses all the milliamperage the patient will stand, usually ten Dr Coleman uses the negative pole in hemorrhage while Dr Zeigler uses the positive, but stated that results may be obtained with either pole because the current is low so that it makes little difference In principle, however the negative pole is used to dissolve tissue and exudates In optic atrophy stimulation is desired and the negative pole is used Dr Coleman agreed with Dr Connor that the time required is a disadvantage and that it is often difficult to get patients to continue the treatment sufficiently long He said that it is impossible to give a prognosis of recovery, but that this applies to other methods of treatment as well, though the day may come when we can Dr Coleman said that the most favorable cases of atrophy are traumatic which have not such a serious basis pathologically as tabes, for instance He said that he considers Dr Keiper's suggestion as to the use of the finger a good one in many respects, but confessed that he does not wish to spend the time He might have patients on three different currents at the same time and would not have fingers enough to go round In regard to regulating the current, he said that the graphite rheostat is unreliable, one may turn on 5 milliamperes and return to the patient in 2 minutes and find that there are 10 He advised getting a metallic rheostat not made of German wire but of a combination metal which is much better A correct meter is also indispensable

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Naming of Carbon Compounds—Nitro is a prefix indicating the group—NO derived from nitric acid by abstracting OH, thus nitroethane C_2H_5NO nitrobenzene $C_6H_5NO_2$ Glycerin trinitrate $(C_3H_5(NO_2)_3$ is often wrongly called nitroglycerin—*Pharm Rev*, August, 1906

TOXEMIA OF PREGNANCY *

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The pernicious vomiting of pregnancy, acute yellow atrophy of the liver, and eclampsia, are generally grouped together as manifestations of the toxemia of pregnancy While eclampsia is admittedly a toxemia, it seems unwise to class it with the other two conditions, from which it differs widely in symptoms, pathology, and prognosis, if not in other respects For this reason it seems to me that eclampsia should be studied entirely apart from the other two types I wish it to be understood, therefore, that wherever the term toxemia is used in the present article it refers only to the toxemia responsible for pernicious vomiting and acute yellow atrophy and not to eclampsia unless so stated

The most pronounced lesion to be found postmortem in a case of toxemia of pregnancy is a degeneration and necrosis of the parenchyma of the liver While this lesion is characteristic of the toxemia of pregnancy, it is not peculiar to it, since practically the same changes may occur in toxemias from other causes, the difference being in degree rather than in kind For instance, an extreme degree of hepatic necrosis is brought about by phosphorus poisoning Similar, though less pronounced changes may occur after chloroform anesthesia, as pointed out by Bevan and Favill[1] and demonstrated experimentally by Offergeld[2] Muller's[2] experiments go to prove that similar effects may follow the administration of ether and other inhalation anesthetics, though the tendency is much less marked than with chloroform Acute alcohol poisoning has been known to produce fatal necrosis of the liver, as noted by Quincke[3] These are examples of hepatic necrosis caused by chemical substances As an instance of a similar process due to a vegetable poison, Quincke mentions the occasional occurrence of liver necrosis as a result of mushroom poisoning The liver changes in yellow fever consist of a degeneration and necrosis, not essentially different from that caused by the poisons mentioned above

The experiments of Traube, quoted by Lusk,[4] would appear to prove that necrosis of the parenchyma of the liver may be brought about by an excess of bile acids in the blood This information must be accepted second-hand, if at all, since the reference to Traube's article is not given by Lusk Traube's experiments might well be repeated with a view to confirming his results If his observation is correct it throws light on some of the obscure deaths in coma following operations for common duct obstruction It would also appear to offer a possible explanation of the pathogenesis of acute yellow atrophy of the liver occurring in males and non pregnant females It would be reasonable to suppose, for instance, that ordinary catarrhal jaundice, when occurring in an individual whose liver is excessively intolerant of the presence of bile acids in the blood may induce necrosis of such a liver in the same way as the various poisons already mentioned This would be an example of hepatic necrosis due to the absorption and subsequent poisonous effect of a physiologic secretion It will thus be seen that necrosis of the liver parenchyma

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* Read before the Southern Surgical and Gynecological Association Baltimore, Dec 11 13 1906

1 Acid Intoxication and Late Poisonous Effects of Anesthetics THE JOURNAL A M A Sept 2 9 1905
2. Archiv f klin Chir 1905 lxxv
3 Nothnagel s Ency of Prac Med 1903
4 Science and Art of Midwifery 1893

may be caused by a variety of toxic substances, besides those peculiar to pregnancy

PATHOGENESIS

The source and nature of the toxins which give rise to the fatal liver changes in pregnancy have been the subject of much theorizing, but so far without definite results The gastrointestinal tract, the liver, the kidney, the ovary, and the ovum,[5] has each been designated as the source of the toxins, but this entire aspect of the subject is still in so much doubt that it is hardly worth while to go into a discussion of the merits of any particular theory It is sufficient to say that, whatever its source, it is generally conceded that there is a toxin in the blood which is responsible for the morbid process in the liver

While little or nothing is known of the source or nature of the toxins which cause the hepatic lesions, something more definite is known of the nature of the lesions themselves Salkowski's classic experiments on autolysis of the liver were followed by Liefmann's[6] observation of the similarity of the liver changes in fatal cases of toxemia to those of the autolyzed liver Furthermore, some of the products arising during the self-digestion of the organ, such as leucin and tyrosin, are also present in the blood and urine in many of the fatal cases of toxemia There is good reason to believe, therefore, that the liver changes in cases of toxemia are in reality due to a process of self-digestion It is claimed by Wells[7] that when the upbuilding function of a living cell is abolished by loss of its nutritive supply or impaired by the action of poisons the last function to be destroyed is the property of self-digestion In Salkowski's experiments anabolism was necessarily abolished owing to the absence of cell nutrition, leaving the catalytic process to go on unhindered It follows that if the higher vital process of anabolism is impaired or abolished by a poison the cell may attack and destroy itself by autolytic action The toxins of pregnancy probably induce the liver changes in this way, through the abolition or impairment of the upbuilding function of the liver cells

Granted that the blood during pregnancy is increasedly toxic, as claimed by Bouchard,[8] we must then assume an insufficiency of the liver function as an essential factor in the production of the morbid symptoms and lesions of the toxemia of pregnancy The formula for its production would be insufficient liver and toxemia on the one hand, resulting in failure of the anabolic function and autolysis on the other The substances in the blood, noxious to the liver cells, would first merely impair the hepatic function, thereby leading to accumulation of the toxins peculiar to pregnancy, as well as those arising from ordinary metabolism, which the liver in its crippled condition is no longer able to neutralize When the toxemia becomes so severe as to be intolerable abortion or premature labor is apt to occur through the effort of nature to relieve the condition by removal of the cause or perhaps as a direct effect of the toxins This generally occurs before the development of actual necrosis in the liver The wide-spread destruction of liver cells, as indicated by clinical symptoms, does not ordinarily occur until after the lapse of a period varying from a few hours to a few days after the uterus is emptied In other words, the removal of the primary cause of the toxemia by terminating the pregnancy, appears to have the effect of aggravating the condition paradoxical as this may seem This was true in four of my own cases, and is a feature of many of the reported cases of others This peculiar behavior of toxemia cases is especially noticeable in those which begin as catarrhal jaundice during local epidemics of this disease These cases do not appear to be at all serious until after delivery, when the symptoms of acute yellow atrophy supervene and lead rapidly to a fatal issue

This tendency of toxemia cases to become worse after removal of the primary cause is a matter of supreme clinical importance, and it is surprising that it has not attracted more notice from obstetricians So far as I can learn from the current literature on the subject, there seems to have been no attempt to ascertain its cause or to forestall its effect Recognition of this peculiarity of these cases forces the conclusion that a new supply of toxins must enter the circulation after the uterus has been emptied It seems to me that the source of these new toxins is not far to seek The postpartum uterus loses weight rapidly after being emptied of its contents, the loss during the first week approximating 50 per cent, according to Williams'[9] figures, the freshly delivered uterus weighing about 1,000 grams and only 500 grams one week later This rapid atrophic process undoubtedly results in large quantities of waste products being thrown into the circulation The burden of neutralizing these products, which must be toxic inasmuch as they are excrementitious, falls on the liver, which in its crippled condition is unequal to the task The impending necrosis of liver cells then becomes actually established

Of interest in this connection is the fact that there is reason to believe that the process of involution of the uterus is itself essentially a physiologic autolysis of the organ, rather than a simple atrophy or fatty degeneration, as heretofore taught This idea is borne out by the occurrence of peptonuria during the puerperium Levene[10] refers to it in his article on autolysis, and something like the same idea must have been in the mind of Fischel,[11] before the advent of the doctrine of autolysis, when he advanced the theory that involution is due to the conversion of the hypertrophied uterine muscle into peptone, and its excretion in the urine Peptonuria presupposes peptonemia, and, as is well known, peptones and albumoses are toxic when present in the blood It is not to be inferred, however, that these are the only toxic substances resulting from the retrograde process in the uterus I presume it will be understood that by the terms peptonuria and peptonemia the presence of albumose in the urine and blood is meant instead of true peptone, which is never present in either fluid unless artificially introduced

Granted that the toxins resulting from the retrograde change in the postpartum uterus are apt to be the determining influence in the actual development of an impending necrosis in the liver, the importance of forestalling their effect is obvious This can only be done by terminating the pregnancy at an earlier date than would otherwise seem necessary In other words, it is not enough merely to determine whether the liver can withstand the pregnancy toxemia, but allowance must also be made for the additional postpartum dose An-

5 Edgar J Clifton Clinical Manifestations of the Toxemia of Pregnancy N Y Med Jour May 5-12 1906
6 Centralb f All Path xvi 12.
7 Delayed Chloroform Poisoning and Allied Conditions THE JOURNAL A. M A Feb 3 1906
8 Autointoxication in Disease translation by Oliver 1894

9 Obstetrics 1903
10 Autolysis THE JOURNAL A M A 1906
11 Ueber puerperale Peptonurie xxiv

other element which is no doubt sometimes the determining factor in an unfavorable case is the anesthetic While this applies especially to chloroform, it must not be forgotten that in order to produce complete anesthesia a toxic dose of an anesthetic is necessary, and, as heretofore stated, all the inhalation anesthetics are to some extent liver poisons

PATHOLOGY

The liver is the principal seat of the pathologic changes induced by the toxemia of pregnancy The process consists essentially of a degeneration and necrosis of the cells of the liver lobules Any of the three zones of the lobule described by Virchow may be affected by the necrotic process, but a careful analysis of published reports would indicate that it attacks by preference the central and mid-zonal areas Schmorl[12] believes that necrosis beginning in the peripheral zone is typical of eclampsia, and his views are confirmed by Williams[13] Both observers, however, attribute the necrotic process in eclampsia to secondary changes dependent on thrombosis of the vessels in the interlobular spaces This explanation of the hepatic necrosis in eclampsia serves to support the view advanced by Williams that eclampsia is due to a different kind of toxemia from that giving rise to pernicious vomiting and acute yellow atrophy According to this explanation the variety of toxemia which gives rise to eclampsia produces thrombosis primarily, the necrotic changes being a secondary effect, while the toxemia which results in pernicious vomiting and acute yellow atrophy is the direct cause of necrosis of the liver cells Ewing[14] considers that eclampsia, acute yellow atrophy and pernicious vomiting are simply different manifestations of the same toxemia While this question remains to be definitely settled, it is my belief that the diversity of the two types of toxemia will ultimately be established In addition to the well-recognized differences in symptoms and pathology, between acute yellow atrophy and pernicious vomiting on the one hand and eclampsia on the other, there is a striking difference in their behavior after the uterus is emptied Barring exceptional cases, the tendency of eclampsia is to get better a few hours after delivery, while that of the other variety is unmistakably in the opposite direction Furthermore, they differ in prognosis, uncomplicated eclampsia being a much less fatal disease than acute yellow atrophy or pernicious vomiting It is not unlikely that mixed types of toxemia may occur, giving a clinical picture that may be interpreted as eclampsia or acute yellow atrophy, according to the bias of the individual observer The existence of these mixed types may be the cause of much of the unfortunate confusion in the terminology of this subject.

In addition to the lesions in the liver, degenerative changes are present in the kidneys and heart, and in eclampsia, small thromboses in the brain and lungs

SYMPTOMS

Vomiting is a prominent symptom of toxemia. When occurring in the early months this symptom dominates the picture to such an extent that the condition is classed as a clinical type under the name of pernicious vomiting of pregnancy This early vomiting is apt to be confused with the benign type due to reflex or neurotic influences, but in the later months its significance is not so apt to be overlooked

Headache is a common symptom, as are also neuralgic pains in other parts of the body Epigastric pain, probably due to the liver changes, is especially significant Increased secretion of saliva is an important symptom present in many of the bad cases It is most noticeable at night during sleep The patient on waking finds a spot on the pillow, due to the dribbling of saliva from the mouth

Air hunger, described by Kussmaul[15] is a fairly constant symptom It was a prominent feature in three of my four fatal cases and in four out of five cases seen with others

Extreme mental depression is present in many cases The patient takes a most gloomy view of her condition and frequently expresses a conviction that she will not recover

Edema of the extremities or face is frequently noted, although it is by no means a constant feature Albumin may or may not be present in the urine Evidences of disturbed metabolism, however, may be rather constantly found

All these symptoms precede the development of the necrotic process in the liver and are due to the toxemia itself Those which depend on the destruction of liver cells are coma and stupor, black vomit, bile in the urine, possibly icterus, rapid breathing, convulsions (always in eclampsia, occasionally in acute yellow atrophy), failure of renal function, failure of circulation Death is the rule after the advent of these grave symptoms, though regeneration of the damaged liver cells and recovery is possible.

DIAGNOSIS

Valuable work has been done by Williams, Ewing and others toward establishing laboratory aids to the diagnosis of toxemia of pregnancy Ewing first called attention to the diagnostic significance of unoxidized proteid derivatives in urine, while Williams was the first to point out the special significance of an increased percentage of ammonia The normal amount of ammonia in the urine is from 3 to 5 per cent, and Williams considers it a danger signal when the percentage reaches 10 or more I am in no position to express an opinion as to the practical clinical value of this test, having had no experience with it. There can be no doubt, however, that the test is based on logical grounds It is well known by physiologists that when in an animal a part of the portal blood is diverted from the liver and carried directly into the general circulation by means of an Eck fistula between the portal vein and vena cava a considerable part of the urea nitrogen appears in the urine as ammonia.[16] Almost all the urea is represented by ammonia if the liver is entirely shunted out of the circulation by ligature of the hepatic artery and of the portal vein on the liver side of the fistula In the light of this experimental data it is to be expected that hepatic insufficiency in the human subject would result in a similar disturbance of the ratio between the urea and ammonia output. While there can be no doubt that the presence of an increased percentage of ammonia in the urine is an indication of a dangerous hepatic insufficiency, it is denied by Ewing[17] that its absence is necessarily of favorable significance It is to be regretted that the estimation of unoxidized proteid derivatives,

12. Untersuchungen über puerperal Eklampsie Leipzig 1893
13. Pernicious Vomiting of Pregnancy Trans Am Gyn. Soc. 1905
14. Pathology and Pathogenesis of the Toxemia of Pregnancy Amer Jour Obst 1907 II 2.
15. Quoted by Bevan and Favill
16. Schafer E A Text book of Physiology 1898
17. Personal communication Nov 19 1906

and especially the ammonia coefficient, is so complex a chemical procedure as to be available only to those who have access to the services of a skilled chemist. The diagnosis must, therefore, continue for the present to rest almost entirely on the clinical symptoms

TREATMENT

Palliative measures, to be effective, must be directed not only against the toxemia but quite as much against the hepatic insufficiency No method of treatment hitherto employed has appeared to influence favorably the impaired antitoxic function of the liver Eliminative and dietetic treatment, intended to reduce the toxemia, while sometimes successful, too often merely postpone the crisis, the morbid condition reappearing at a later date in aggravated form I have seen several cases behave in this way, and many other examples may be found in the literature In view, therefore, of the impracticability of treating the hepatic insufficiency, and the unreliability of treatment of the toxic condition itself, it seems to me that palliative measures should have no place in the management of a recognized case of toxemia of pregnancy

Radicalism is, then, the only alternative, and in the interest of the patient it should be resorted to early and without reference to the interest of the fetus Assuming that the diagnosis is established, the indication to empty the uterus is just as urgent as the indication to operate in a case of recognized ectopic pregnancy before rupture. If the condition arises during the early months the question as to whether to empty the uterus at one sitting or to induce abortion by a slower method must be decided according to the urgency of the case On account of the possible unfavorable influence of anesthesia, nonoperative induction of abortion should be given preference, other things being equal This rule should also be followed in the later months for the same reason. A protracted labor should not be permitted, however, as the excessive muscular exertion would add its quota to the toxemia already existing If the case is very urgent, rapid delivery may be accomplished by means of whatever obstetric operation seems to be best suited to the case Cesarean section may be performed by either the vaginal or abdominal method, provided that the exigencies of the case appear to call for such an operation If, however, for any reason it is seen fit to perform the abdominal operation, the question arises as to whether it would not be advisable to remove the uterus at the same time in order to avoid a probable increase in the toxemia as a result of the process of involution

In any operative procedure on a patient with toxemia inhalation anesthesia should not be employed if it is possible to avoid it, for reasons already stated Spinal anesthesia, free as it is from the disadvantages of general anesthesia in this condition, is worthy of favorable consideration In any event, chloroform should never be used in a case of toxemia of pregnancy

REPORT OF CASES

Case 1—Mrs J P A., aged 19, primipara, was seen with Dr Wyatt Heflin

History—Pregnancy was uneventful until the beginning of the eighth month, when she contracted what appeared to be an attack of catarrhal jaundice, a disease which was prevalent in the neighborhood at the time The jaundice continued for two weeks, when labor came on, Jan. 14, 1903, about two weeks before full term Spontaneous delivery occurred in four hours The patient's condition was apparently normal except for jaundice, until forty eight hours after delivery, when she gradually sank into a stupor and died January 17, about seventy two hours after delivery A few hours before death she vomited a quantity of coffee-ground material A specimen of urine obtained just before death contain leucin crystals, and this finding, together with the clinical picture, led to a diagnosis of acute yellow atrophy of the liver The case was reported as such before the Jefferson County Medical Society, Feb 9, 1903 Postmortem was not allowed.

Case 2—Mrs A. E S, primipara

History—Pregnancy presented no abnormal feature except edema of extremities and face The urine was examined repeatedly for albumin and casts, but always with negative results Labor, about full term, began Sept 9, 1904 After twenty four hours' useless labor delivery was accomplished by version Chloroform anesthesia was used and was somewhat prolonged on account of repairing an extensive perineal laceration The patient's condition was good until the morning of September 13, sixty hours after delivery, when she was found by the nurse in a partial stupor This steadily deepened, and jaundice appeared a few hours later and rapidly increased. Death occurred September 14, eighty four hours after delivery Postmortem was not allowed Neither leucin nor tyrosin crystals could be found in the urine. A diagnosis of acute yellow atrophy of the liver based upon clinical symptoms alone

Case 3—Mrs C H. C, primipara, aged 34

History—Nausea and vomiting, with albuminuria, appeared about the end of the third month The condition improved remarkably on a milk diet and eliminatives Under this treatment the woman's condition remained apparently normal until the end of the seventh month, when the symptoms returned rather suddenly After a few days of palliative treatment labor was induced, and after a tedious labor delivery was accomplished by forceps under chloroform anesthesia Black vomit appeared while she was still under the anesthetic, and consciousness never fully recovered Urine was very scanty after delivery, and contained albumin, casts, and bile pigment. Death occurred thirty six hours after delivery No postmortem

Case 4—Mrs I L. A., second labor

History of Previous Pregnancy—She was attended by me in her first labor, May 16, 1901 She had suffered very much from nausea and vomiting during that pregnancy Delivery was accomplished by forceps Twenty four hours after delivery a mild, acute mania developed, which lasted about one week. Convalescence was slow, but finally resulted in complete recovery She was advised by me not to attempt to go through another pregnancy, but after two years of fairly good health, she again became pregnant in August or September, 1903

Subsequent Pregnancy—In this pregnancy she almost lost her life from pernicious vomiting She steadfastly refused to consent to the induction of abortion until she was in a desperate condition Abortion was finally induced, however, and she made a slow but satisfactory recovery She became pregnant again five months later, and got through the early months very well compared to the previous pregnancies At the beginning of the sixth month, however, persistent vomiting set in, accompanied by scanty urine and albuminuria She again refused to consent to having the pregnancy terminated until she began to suffer from "air hunger" She then consented to have labor induced, but her symptoms rapidly grew worse, and she had already sunk into partial coma before the preparations for delivery had been completed The delivery was accomplished by version, the necessary dilatation of the cervix being obtained by means of the Bossi dilator The entire proceedings were completed in thirty five minutes, and without damage to the maternal structures A very small quantity of chloroform was given, very little being required, owing to the partial stupor Her pulse was almost imperceptible at the time of operation, and failed to respond to stimulation during and after the delivery Death occurred four hours after delivery Postmortem was not allowed

Case 5—Mrs W G O, third pregnancy

History—The patient suffered from headache, pression, edema of face and extremities, insomn albuminuria, scanty urine and profuse salivation

ment occurred under palliative treatment Labor was induced at the seventh month of pregnancy, and a living child was delivered. Recovery was uneventful

CASE 6—Mrs J D H., was seen with Dr R B Harkness, third pregnancy

History—Eclamptic convulsion had occurred after the first labor The second pregnancy and labor were uneventful One convulsion occurred at the fourth month of the third pregnancy Improvement took place under palliative treatment The woman had an easy labor at full term Rapid pulse and labored breathing with partial stupor developed a few hours after labor The condition was exceedingly grave Convalescence was slow and complicated by endocarditis and thrombosis of the veins of the left arm

CASE 7—Mrs W H. T was seen with Dr D F Talley

History—The principal symptoms were "air hunger" and vomiting of coffee ground material Pulse was rapid and weak Premature labor was induced by Dr Talley and recovery was uneventful

CASE 8—Mrs J O T was seen with Dr D F Talley

History—This patient suffered from persistent vomiting of coffee-ground material, which gave the blood reaction with the guaiac test There were also present mental torpor and profuse salivation. Premature labor was induced by Dr Talley and recovery was uneventful

CASE 9—Mrs B was seen with Dr E S Casey

History—Spontaneous abortion occurred Sept 27, 1906, in the third month of pregnancy The uterus was curetted on account of retained secundines, Oct 4, 1906, under ether anesthesia Temperature remained high, and on the day following the curettage, coma and jaundice appeared The jaundice deepened rapidly, coma became profound and death occurred Oct 6, 1906, eight days after the abortion Postmortem was not permitted

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INFLUENCE OF THE MOTHER'S HEALTH IN PREGNANCY ON HER UNBORN CHILD *

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EDINBURGH

There are three epochs of a child's life during which the mother's influence is supreme The middle period of the three is that of lactation, and it is followed by a time of varying extent, lasting usually till the child goes to school, while it is preceded by an antenatal epoch of at least nine months' duration It is with the last named of the series only that I am here concerned, but it may make for lucidity if I indicate briefly the kind of influence which a mother exerts during the other two periods, both of which are distinguished from the third by the fact that they are postnatal I will call the three epochs in their order 1, Antenatal, 2, lactational and, 3, postlactational

The *postlactational period* of influence extends from the time of weaning, which may, perhaps, be stated roughly as occurring at the ninth month of the child's life, to the year when the child goes to school or in some other way passes from under the immediate supervision and control of the mother During these years, which may be estimated at five or six, the mother's influence over her child is preëminent, it is not, however, exclusive of all others, for the father, or the nurse, or brothers and sisters, may all have a certain degree of control over the health destiny of the young child growing up among them Nevertheless, the maternal influence far outweighs that of all the rest combined, and it may be stated generally that the mother determines what shall be the food of her child, what shall be his clothing, what the amount and kind of exercise shall be, what shall be the physical surroundings, and vastly more subtle, what the moral and religious atmosphere If she be a wise mother she will endeavor to supply him with food suited to his age and requirements, she will see to it that he is clothed in accordance with the needs of exercise, indoors or outdoors, and with the varying conditions of climate and season, and she will take care that his body hygiene, as well as that of his nursery and playroom, be the best that can be obtained In all these matters she will ask for, and ought to receive, the best advice from her medical attendant, and, if she employ a trained nurse to look after her child's interests during a part of the day or night, she ought to choose one capable of understanding the reasons for the rules of health in childhood She will endeavor also to shield her child from epidemic and exanthematous dangers, and from the more persistent and pernicious effects of bad habits acquired in early life It is no exaggeration to say that, for the proper performance of a mother's functions, as they are mapped out above, a very large part of a mother's time must be set aside That all women who have borne children are not willing to devote so much time to the business of influencing their offspring's future is a commonplace, but such women can hardly lay claim to the name of mother, for a mother's duties do not cease with the close of the third stage of labor

In the *lactational period*, the first nine months of postnatal life, the infant's welfare is even more dependent on the mother's care and interest. Her influence is now more than preeminent, it is practically exclusive. The child is drawing his entire nourishment from the maternal tissues, he is watched over by his mother day and night, nothing, it may be said, can happen to him without her knowledge and consent Her dietetic errors are reflected in his arrested nutrition, her emotional disturbances and social distractions are transmuted into his digestive disorders, and the diseases from which she may suffer may either be passed on to him or in less direct ways, by altering the composition of her milk, may affect the performance of his bodily functions Should she become pregnant while nursing, both the infant at the breast and the fetus in the uterus will feel the strain that is thus put on her organism I need not linger over this period of maternal influence, for I think every one admits that the state of an infant is a very fair test of the structural and functional integrity of his nursing mother Neither, unfortunately, is there any need to inform the medical practitioner that mothers, some of them perhaps from inability, others more likely from disinclination, too often are not found standing in this close relationship to their young infants There may be dangers to the infant from drawing his supply of milk from her breast, but the dangers are multiplied when he has to depend on the cow or the manufacturer of artificial food, although I freely admit that the cow has often proved a benefactor and that the manufacturer has sometimes shown ability and ingenuity

THE ANTENATAL PERIOD

But it is more with the influence of the mother on her child in the antenatal period of his existence that I have to do here The extent and character of this influence are to a large degree unknown to or unconsidered by many medical men Too often physicians allow notions of the

* This paper was prepared to be read in the Section on Diseases of Children at the Fifty-seventh Annual Session held at Boston June 1906.

potency or impotency of maternal mental and emotional impressions to prejudice their whole conception of the prenatal relationship existing between mother and fetus While I do not affirm that a mother's mental and emotional state during pregnancy has no influence on her unborn child (indeed, I believe there is such an influence), yet I deplore the fact that scientific men have been led away from the plain facts and ascertainable phenomena of the transplacental transmission of maladies, predispositions and immunities to the consideration of such a will-o'-the-wisp as the effect of the mother's imagination

While, no doubt, mental depression and emotional disturbances take their place among other etiologic factors and have an effect on the mother's general health, and so on that of the fetus, just as on that of the suckling, yet the influence of such states is probably slight compared to that of, say, toxins in the mother's blood and diseases of the placenta But that a maternal mental picture, pleasant or unpleasant, can impress itself on the body of the fetus as a photographic negative is reproduced on a print is, in my opinion, entirely without scientific basis Such a belief has been the cause, direct and indirect, of a great deal of misdirection of inquiry, and the nature of the results obtained has been such as to bring to the whole subject a certain measure of disrepute

The subject I shall endeavor to discuss is, then, how the state of the mother's health in pregnancy influences that of the child to whom she is to give birth, and, with what I have said above, I shall dismiss the ancient but discredited theory of maternal impressions and pass to views which can commend themselves to the scientific mind

THE RELATIONSHIP OF FETUS TO MOTHER

First, it is necessary that a clear conception exist as to the relationship of the offspring to the mother before birth I do not intend to consider the manner in which the ovum in the Graafian follicle is influenced by the maternal metabolism, nor do I intend to deal with heredity at all, I shall limit the discussion entirely to the influence of the maternal on the embryonic and fetal organism, during the nine months of pregnancy, which is a completely different matter from heredity, as heredity is generally understood It is true that heredity and the influence of the mother on her offspring in pregnancy are constantly being confused and even regarded as one and the same thing, but they are distinctly different, unless, indeed, we are prepared to call the influence a woman has on her child at the breast, through her milk, a hereditary one, and this assumption, I think, few will allow I exclude heredity, therefore, not because I do not admit its action, although I believe we know extraordinarily little about it, but because I wish to focus attention on the much less hypothetical effect produced by the state of the mother's health on that of her infant *in utero*

THE PHYSIOLOGIC RELATIONSHIP

In the early weeks of pregnancy the impregnated ovum, embedded in a mass of cells which may be conveniently termed the trophoblast, is attached to the wall of the uterine interior, processes from the trophoblast push their way into the uterine blood sinuses in the mucous membrane at the site of attachment, and embryonic blood vessels invade the processes and so come to lie bathed in the maternal blood with only a layer or two of trophoblast cells intervening As the weeks pass by, specialization takes place and there is formed a definite placenta in which villi, with contained fetal vessels, lie in pools of maternal blood, but the essential character of the relationship remains the same The fetal and maternal bloods do not mix, unless, indeed, a hemorrhage into the placenta takes place, but they are sufficiently near each other, and the intervening tissues are sufficiently porous, to permit the passage of fluids, gases, and even of solids from the one blood to the other This is what I mean when I speak of the transplacental interchanges The laws of these exchanges are not yet fully known, but enough has been ascertained to lead us to believe that there is a constant flow from the maternal into the fetal blood of oxygen, water, chemical substances (such as lime, iron, potash, and soda) in solution, proteids, fats, and even of white blood corpuscles From the fetal into the maternal blood there is a reverse current consisting mainly of effete materials to be ultimately got rid of by the mother's excretory organs It also is known that under exceptional circumstances other things pass over from the one organism to the other, among which may be mentioned poisons, toxins, microbes, and agglutinins Why in one case these exceptional substances pass over and in another case do not we are not in a position to state The easiest explanation of their passage, as the occurrence of a hemorrhage or of disease in the placenta breaking down the tissues intervening between the two bloods apparently does not apply to all cases, although it may be accepted for some We must, no doubt, look on the peculiar states of the fluids on the two sides of the placental barriers as the cause, and the discovery by physiologists of the regulating factors in the transmission of fluids through animal membranes in other parts of the body, will very likely aid us before long in the solution of this antenatal problem, unless, indeed, the solution of the antenatal problem antedates that of the postnatal one

It is an interesting question whether or not there is any other route by which materials may pass from the mother to the fetus or in the reverse current from the fetus to the mother I think there is some evidence to show that in some instances, at least, there may be a circulation of the liquid amnii and that in this way substances may so pass, thus escaping the placental barriers In other words it seems likely that some chemical substances in solution may transude into the amniotic fluid from the maternal tissues of the uterine wall and be swallowed by the fetus and so reach the fetal tissues

COMMUNICATION BETWEEN MOTHER AND FETUS

I am now in a position to refer to the influences which by one or the other or by both of these routes may pass from the maternal to the fetal organism The most familiar instances are those in which the mother has an infectious disease, such as smallpox or measles and gives birth to an infant with obvious signs of the disease in question on it There are two possibilities in such an occurrence Either the cause of the maternal disease has passed through the placental or amniotic barriers and affected the fetus also, or else the infecting substance whatever be its nature, has affected both the maternal and fetal organisms at the same time In other words it is not certain whether the mother is first infected and then infects the fetus, or whether the latter is simultaneously infected with her It may be said that the incubation period in the case of the fetus will show which is the correct view, but there is a difficulty for the data

are difficult of ascertainment and there is always a probability that the incubation period may be shortened in the case of two organisms so intimately in contact with each other as those of mother and fetus

Other instances are those in which a disease, caused by a special microbe, is transmitted from mother to fetus, as is proved by the discovery of the microbe in the placenta and in the tissues of the fetus if it should be born dead Such maladies are fetal sepsis and fetal tuberculosis It is true that the latter is extremely rare, but it is also true that a few absolutely proven cases have been recorded Further, when the tubercle bacillus surmounts the placental barriers, there is abundant evidence that it finds in the fetal tissues a suitable culture medium, for in the authenticated instances of fetal tuberculosis the disease has been of that virulent type which is usually seen only in birds (avian tuberculosis) We are forced, then, to conclude that the placenta plays a strongly protective rôle in connection with the unborn infant of a tuberculous mother Perhaps other microbes attack the placenta itself, rather than other tissues, and so more readily overcome its opposition while the tubercle bacillus is held in check by some chemical substance in the placenta or by an essential weakness in itself The vitality of the placenta is probably very high, on account of the large amount of epithelial tissue it contains, and so perhaps its resistance to bacilli is great If this be so, it will account for the ready passage of microbes which thrive in strong tissues and for the difficulty of passage of such as breed best on devitalized structures

Again, there is another group of diseases which are not transmitted to the fetus in the same form as that which they exhibit in the mother Typhoid fever, for instance, is known to have an effect on the fetus, for the germs of it have been found in the fetal tissues in cases in which the mother has suffered the disease and given birth to a dead infant. But, probably on account of the inactive state of the fetal intestine, or by reason of the umbilical mode of entrance of the germs into the fetal body, the malady takes the form of a general blood poisoning rather than that which is associated with typhoid in the adult Here, then, it may be that the mother's disease causes morbid changes in the unborn infant which are not those occurring in the maternal organs, but which are due to the same microbe Possibly, also, diseases not yet shown to be due to a microbe, such as eclampsia, influence the fetus in this obscure manner, perhaps toxins pass the placental barriers and disturb the nutrition of the fetus It may be difficult to find a name for these diseased states, they are semi-diseases, but I think that their existence is undoubted and I have given a chapter to their consideration in my recent work "Manual of Antenatal Pathology"[1] The occurrence of morbid states in the fetus due to the passage of toxins from the mother, due in their turn to diseases of the mother leads me to refer to fetal maladies caused by the invasion of the body of the unborn infant with toxic materials such as lead, alcohol and mercury There is every reason to believe that the placenta acts as a barrier to the passage of these substances also but it occasionally fails either by reason of the great amount of the poison or on account of the presence of disease in the placenta The placenta also seems to save the fetus by storing up the poison in itself, as does the liver in the adult, and this fact, I think, explains how it is that the usual result, when the placental safeguard is broken down, is the expulsion of a dead fetus and not a diseased one The poison has spent its force on the placenta, and by destroying it has killed the fetus, there has been no time for the poison to produce its specific effects on the fetus

It must never be forgotten in dealing with fetal pathology that the placenta is one of the fetal organs, and a very vital one, and that when it is attacked and injured the results to the unborn infant are very serious, much more immediately serious than if, for instance, the fetal lungs, stomach, brain or kidneys were grossly degenerated This is probably one of the chief reasons why maternal syphilis has so terribly disastrous an effect on antenatal life, for it causes such marked lesions in the placenta

I have here attempted the merest sketch of the influence which maternal maladies, alcoholism, drug habits and the like may have on the unborn infant, and I have not touched at all on the effects which these same morbid agents may have on the organism in the embryonic stage of its antenatal existence. I believe the latter changes to be teratologic, not pathologic, but into that very large question I do not propose to enter

SUMMARY

1 All diseased conditions of the mother in pregnancy, whether due to microbes, toxins, toxic agencies or diatheses, are, I believe, dangers to the fetus

2 The fact that the fetus sometimes, perhaps often, escapes must be largely ascribed to the protective influence of the placenta

3 The morbid influence may either force its way through the placental barrier and so reach the fetus and cause disease, etc, in it or, by destroying the integrity of the placenta itself, it may cause death of the fetus

4. The laws that regulate the placental interchanges, normal as well as pathologic, have not yet been discovered

5 The great safeguard of the fetus, if the mother be diseased, is a healthy placenta which opposes the passage of germs and toxins and which is not itself liable to the attacks of these morbific agencies

6 We do not yet know if there are any medicines which act, as it were, as placental tonics, perhaps potassium chlorate and mercury are of this nature and possibly some of the organic extracts may be found to have this action

1 Illustrative instances of the statements made in this article will be found in abundance in this work especially in Chapters XI to XVI

SURGICAL ANESTHESIA,

WITH SPECIAL REFERENCE TO POSTANESTHETIC NAUSEA AND VOMITING

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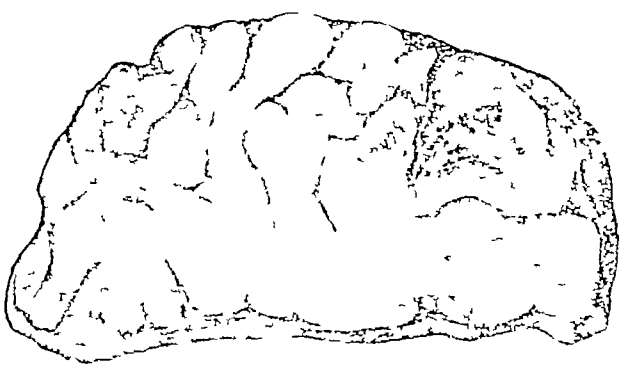
Much has been said and written on the important subject of anesthesia Still there has been one particular point that has as yet never been satisfactorily settled, so far as I am able to learn I refer to the distressing nausea and vomiting that so often follows the administration of ether and chloroform

After having exhausted such methods as lavage, filling the stomach with water prior to the operation, pungent odors to nostrils, hypodermic medication, etc, without any apparent beneficial result, I began experimenting with a measure at once simple in use, logical, harmless and, to my mind, expedient

servations, histologic studies, all lead to this view that a cooperation of all constituent portions of the brain is necessary for a normal function of intellect and that only a diffuse alteration of the brain is able to produce a modification in intelligence Nevertheless, the anterior portion, the so-called prefrontal lobe, has been recognized since Gall, as the preponderantly better developed in highly intellectual individuals and that mental deficiency goes hand in hand with abnormal frontal lobes According to Meynert, the weight of parietal and occipital lobes together, is to the frontal lobe as 3 to 6

Pathologic studies of the brain have thrown considerable light on the question of localization of higher psychic function Sifting all the accumulated data, especially those concerning cerebral tumors, the conclusion can be drawn that while a lesion of any portion of the brain is capable of giving place to mental disturbances, yet on the other hand most pronounced lesions are sometimes unaccompanied by disturbed psychic functions, nevertheless it is generally admitted by the majority of observers, that a tumor or any lesion of the prefrontal region, particularly of the left (Phelps) is more frequently attended by mental disturbances than a lesion of any other portion, except, perhaps, of the corpus callosum Attempts have been made to determine whether or not, among all possible *normal* mental



Apparently recent hemorrhagic area in the white substance of the left prefontal lobe.

phenomena, there are some that are especially characteristic of the function of the prefrontal area, also whether in pathologic conditions of the same region *special abnormal* mental phenomena are present

Among all possible lesions of the prefrontal lobe, tumors are the best studied and indeed the majority of observations concern those of prefrontal neoplasms Léonora Welt[1] made a careful study of eight cases of various lesions of the prefrontal lobe and noticed the following mental symptoms The patient is morose, taciturn suspicious, and at times violent L Steven[2] concludes from his studies that patients thus affected are very facile in temperament, unable to concentrate their attention and present loss of memory for recent events Bianchi, who made exhaustive studies of the subject, points out the following mental symptoms Restlessness, indifference great irritability, want of criticism, automatism Flechsig, who places in the frontal lobe one of his association centers, finds in diseases of this area a loss of sense of relation of personal consciousness to outside influences, inability to discriminate possibilities from impossibilities and, finally, loss of self-control

1 Thèse de Paris 1888
2 Glasgow Med. Jour., lxv 1906

Summing up the opinions of all observers, the following are the principal symptoms Mental hebetude, automatism, excitement and irritability, or else depression, disorientation and loss of power to concentrate attention The German writers long ago called attention to a special symptom, which they found in a large number of cases in diseases of the prefrontal lobe Jastrowitch gave it the name *Moria,* Oppenheim calls it *Witzelsucht* The characteristic feature of this symptom is the humoristic spirit which is seen in the patient's actions and words Although it is not present in every case, and this symptom was observed in tumors of other areas of the brain, it is nevertheless admitted by many writers[3] to be present more frequently in affections of the prefrontal lobe than of any other region of the cerebrum

The patient, whose history, I am about to relate, presented during life in addition to excitability, disorientation motor restlessness, indifference to surroundings, inability to concentrate attention, all symptoms to some extent characteristic of prefrontal lesions (see above)—a state which can be called "euphoria." This term is a more general expression of the happy, contented state of mind It is certainly allied to *Moria* and *Witzelsucht,* but it is broader in its conception The case is highly interesting because of the appearance of mental phenomena shortly before death and at autopsy a recent hemorrhage was found in the left prefrontal lobe

History—J M R, aged 34, upholsterer, had a hemiplegic attack at the age of 25 He improved rapidly, so that at the end of six weeks he returned to work and remained at his place of business until about five days before death The hemiplegia persisted to a mild degree, but his speech was somewhat impaired The mental faculties were intact, as he was able to carry on his business, his transactions with his customers and his relations to his family being perfectly normal About five days before death, while seated at the table, he suddenly became unconscious A few minutes later, when his consciousness returned, he showed marked confusion On the following day he became restless and violent. He would strike any one who approached him

Examination—When I saw him he presented no new localized symptoms in addition to the old mild hemiplegia on the left The mental phenomena were very interesting He was indifferent to surroundings It was almost impossible to hold his attention for longer than one minute Questioned about events or objects familiar to him he would give one or two answers, but would immediately take up another subject He was very restless, threw off the bedclothes, then sat up, lay down and so one He ignored the presence of females, as he frequently uncovered himself Asked where he was, he replied, "in Paradise" The most striking symptom was the constant passing of his hands over his face and putting his hair and moustache in order He insisted on having a mirror on his table, would incessantly look in the mirror, and express pleasure at seeing himself in good shape. He often repeated the word "pretty" or "handsome" When any one would enter the room he would sit up suddenly, grasp the stranger's hand, pull him and twist his fingers, repeating continuously the words "glad to be with you" Every act and word expressed enchantment. Whoever appeared at the door, he claimed to know well and asked to remain At times he would attempt to joke with the stranger, saying he sent him flowers or a check the day before, and then would laugh aloud Then again he would forget it and return to his mirror and to putting himself in good shape, totally ignoring every one around him This was evidently done in an automatic manner Any article of food tasted delicious, he expressed pleasure at anything offered him He was unable to sleep The condition lasted four days when

3 Schuster Psych Störung bei Hirntumor and Gianelli Il Policlin, 1897

the patient gradually became comatose and expired at the end of the sixth day

Autopsy—At autopsy I found, besides an old softening in the right internal capsule, a recent hemorrhagic area in the white substance of the left prefrontal lobe (see illustration) Microscopic examination of the brain and the spinal cord shows the descending degeneration traced from the right internal capsule It may be of some interest to know that the patient had a tendency to bleed easily and profusely on the slightest occasion This factor probably was the immediate cause of the cerebral hemorrhage

The present case is interesting therefore, because of the causal relations of a lesion in the left prefrontal region to the mental phenomena and because of the special character of the latter, similar to those observed by other authors The euphoria of the patient was striking, he expressed a psychic childishness in his acts and words Since an analogous symptom was observed by others, viz, *Witzelsucht, Moria,* and since in my case it was the most conspicuous phenomenon throughout the man's brief illness, perhaps it could be considered to some extent as pathognomonic of diseases of the frontal lobe This contribution to the study of pathology of the prefrontal lobe adds a new, although not absolute, proof of the localization of the higher psychic functions in this region of the brain

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ACUTE OVERSTRAINING OF THE HEART *

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It is now about thirty years since Peacock, as a result of observations made by him on Cornwall miners, acquainted us with a special form of heart disease, the etiology of which he tried to connect with previous muscular straining

His observations were confirmed later on by the investigations of Myers, Clifford Albutt, Da Costa, Joh Seitz, Munzinger, etc Nevertheless, there were other authors that did not admit of a condition of excessive heart-straining, or at least were very doubtful about it, as, for instance, v Schroetter, E Seitz and Strumpell It was the investigation of Leyden and Fraentzel which again gave new impulse in this domain, and in one of my publications I was enabled to mention these observations of cases which correspond with those of both last-named authors

We naturally have to distinguish between a chronic and an acute overstraining of the heart, and it is hardly necessary to mention that the first can result only from an accumulation of repeated single overstrainings, the investigation of the latter is, therefore, of extraordinary interest Many former doubts have been dispelled by a series of observations (Leyden, Fraentzel and myself), as well as by a better knowledge of the physiology of the heart Nowadays we possess a better knowledge of the innervation of the heart and are also better acquainted with the functions of the pneumogastric and sympathetic and of the extra- and intracardiac nervous centers —I refer, among others, to the coordination center of Kronecker-Schmey etc All this may help to clear many misunderstandings which may be of consequence in the different manifestations of heart-overstraining The numerous investigations on the intracardiac as well as on the intravascular pressure command attention also the exact determination of the time-limits of the rhythmic cardiac movements, and above all the reflex actions which may influence the activity of the heart from the lungs, the blood vessels, the abdominal viscera and other organs Such investigations have become so numerous and so many well-known names are connected with them that it is impossible to mention them in detail and superfluous to report on the conclusions which have already become the common property of medical science

Let us now consider the question whether or not an acute overstraining of the heart ever actually occurs According to Leyden, Fraentzel and myself, we must admit of such a possibility Still, in spite of all the histories of cases published so far the objection was raised that the heart itself had already undergone some previous change either in structure or in function and that the subsequent straining was only a determining cause for further aggravation Although former investigations, as well as a number of old and recent cases left me hardly a doubt that a pure acute overstraining of the heart actually does occur, I considered it advisable to investigate this important question more closely For through the solution of this problem we obtain definite conclusions regarding not only acute and chronic overstraining of the heart but also many other obscure points concerning the pathology of chronic heart diseases On these grounds I have instituted a number of experimental investigations

When we look at the literature we find, apart from the psychical influences which later on we shall also consider more closely, that all those causes which lead to an injury of the heart through bodily overstraining were referable to muscular actions of different kinds such as the lifting or carrying of heavy burdens, dancing, straining marches, etc These always had in common the one fact that a dyspnea of longer or shorter duration had invariably been called forth by the most varied muscular movements

In order to study the influence on the heart of such muscular actions as lead to dyspnea I selected wrestling which I had performed by healthy, strong men in such a manner that they alternately inhibited their movements by forcibly resisting each other or by each lifting his antagonist I might also remark that for my experiments only such persons were selected whose clinical histories as well as local examinations showed them to be possessed of absolutely normal organs

Before the wrestling began the heart limits and the point of the apex-beat were correctly outlined sphygmographic curves and blood pressure registered, the position of the diaphragm and the posterior pulmonary limits located, the frequency of the respiration and of the pulse, the quality of the pulse-waves and of the heart sounds accurately determined As long as no dyspnea appeared only an increase in the frequency of respiration and pulse were noticeable everything else remained as before But even a very few minutes after actual dyspnea had manifested itself the picture was changed The heart limits were removed outward for 1 cm or more, the apex-beat was shifted visibly and perceptibly toward the axilla the respiration was often more than doubled the pulse pressure which at first was increased was ultimately reduced to the amount of 10 20 and more mm Hg according to the increasing severity of the dyspnea Both tables A and B illustrate this as well as other observations made during the wrestling

As shown (Figs 1 to 8) increa[illegible]rdiac p[illegible]

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* Read before Johns Hopkins Medical Society in Baltimore Jefferson Medical College in Philadelphia Medical College of Ohio and Medical Department of the University of Cincinnati

sure manifests itself by arrhythmia, and we even notice a pause (Fig 2), once after three, again after four pulsations, this has also been mentioned by Knoll in his investigations on the alterations of the heart-beats In the experiments of which I speak the retardation could naturally not take place on account of the strong dyspnea, and it was obviously impossible to obtain curve-tracings of the pulse during the act of wrestling itself

The relaxation of the vascular wall is very evident (Figs 3, 4, 5 and 6), as this manifests itself by a greater ascension and stronger dicrotism (Sommerbrodt) Whether we have to deal here simply with an effect of a reflex action dependent on the magnitude of the intrabronchial pressure with conditions of irritation due to deficiency of oxygen or of accumulation of carbondioxid or with still other reflex relations, has not yet been determined

We certainly possess in the vascular system itself a powerful factor which is able to interfere compensatorily but this is possible only to a certain extent, beyond which it is no longer able to establish an equilibrium Thus I have often seen that the strongly dilated heart is not longer able to send a sufficient quantity of blood into the arterial system even with accelerated and deeper respiration, the pulse becomes small (Fig 8), even occasionally thready, the blood pressure falls excessively (as is also evident in the pulse-tracings), or the increased intracardiac pressure which is still present after a longer period of rest continues to manifest itself by arhythmia

I should like to call special attention to the change in size which the heart undergoes, since this appears to me to be of great importance I mean the dilatation of the heart which takes place to the right as well as to the left and which you may be able to recognize by the diagrams[1] (Figs 14-19)

The following may be mentioned for clearer information The heart limits in H B (which correspond also to Table A and the tracings in Figs 1-6) were determined by a renowned colleague[2] well versed in the art of physical diagnosis by the ordinary percussion

TABLE A**

H B masseur aged 20 196 5 cm tall muscles powerfully developed little adipose tissue all examinations show normal conditions

Conditions	Time Hr	Time Min	Kind of Motion.	Position of Diaphragm	Respiration	Pulse	Quality of Pulse	Heart Sounds	Blood Pressure by Basch's Sphygmomanometer	Apex Beat Seen.	Remarks.
Before wrestling	4	33		Upper margin of sixth rib	16	84	Full soft not easily compressible	All clear	115 mm. Hg	0 5 cm int to nipple	
	4	45	After three rounds of severe wrestling			150–60	Irregular	Clear, irregular	130 mm Hg	0 5 cm. ext to nipple.	Dr L and I both note dilatation of 2 cm of right ventricle
After simple wrestling	4	55	Continued wrestling			168	Here and there some irregularity	Clear, irregular	105 mm Hg		
	4	56	Renewed wrestling			156	Here and there some irregularity	Clear irregular	100 mm. Hg		
	5	8	Before wrestling	Lower margin of fourth rib	21–22	108					Positi'n of diaphragm shifted upward 2 cm
	5	20			40–42	140–150	Full, regular	Clear		5 5 cm ext. to mammillary line is perceptible in fourth intercostal space	Feeling of palpitation and shortness of breath duri'g wrestling no painful sensations anywhere
Wrestling with belt tightened around the abdomen.	5	21	1 min pause		40	140	Full, regular	Clear			
	5	22	1 min wrestling	Lower margin of fourth rib	,	144	Irregular				
	5	24	After 20 min pause.	Upper margin of sixth rib	18–20	96–100	Still irregular, full	Clear	100 mm. Hg		Feels well no longer sensation of palpitation or shortness of breath.
During test with out belt.	6	2		Upper margin of sixth rib	18	90	Regular	Clear	95 mm Hg	0 5 cm ext. to nipple	

** The exact measures of the heart limits are apparent in the appended special diagrams. The blank spaces under their headings are due to the impossibility of noticing every symptom simultaneously

TABLE B

F S masseur aged 45 muscles powerfully developed moderate adipose tissue all examinations show normal conditions.

Conditions	Time Hr	Time Min	Kind of Motion	Position of Diaphragm	Respiration	Pulse	Quality of Pulse	Heart Sounds	Blood Pressure by Basch's Sphygmomanometer	Apex Beat Seen	Remarks
Before wrestling	1	35		Sixth rib	12	90	Full, soft easily compressible	Clear	135 mm. Hg	1 cm int. to nipple.	
	1	38	Three min. wrestling	Sixth rib		126			140 mm Hg		
During and after simple wrestling	1	44	After 4 min severe wrestling and lifting	Sixth rib		135			115 mm Hg	3 cm ext to nipple	Free perspiration severe dyspnea
	1	45	1 min. pause		36	128					
	1	57	12 minutes pause	Upper margin of fourth rib	21	116		Clear	125 mm Hg	2 5 cm ext. to nipple	
Wrestling with tightened belt around the abdomen	2	2	After 4 min wrestling and lifting			148		1st heart sound little muffled at apex not clr	105 mm Hg	5 5 cm ext. to nipple	Severe dyspnea deep respiration impossible cyanosis of face
	2	5	After 3 min pause		20	110			125 mm Hg	4 cm ext to nipple	
During pause without tightened belt	2	22	After 10 min. pause		14	104	Full soft	Clear	135 mm Hg	1 cm ext. to nipple.	

1 These diagrams as well as the above tables and series of curves in all cases refer to the same two persons

2 This colleague partly made all the observations referred to in the foregoing tables or tested their accuracy

method, then also by myself according to my late brother's method of percussion with lateral limitations These latter limits correspond to the total cardiac boundaries as has been fully demonstrated elsewhere. The cross near the nipple marks the place of the perceptible apex-beat in all cases You will see by the diagrams how wrestling, when once it has called forth dyspnea, is able to dilate the heart, both to the right and to the left to the amount of 1 to 2 cm and more It is evident that this dilatation is produced only by the accumulation of blood in the cardiac cavities, a so-called congestive or passive dilatation having taken place. The ordinary method of percussion requires a cautionary measure Then, when we percuss immediately after wrestling during the state of highest dyspnea, it may happen that we find not only no broadening of the originally determined heart limits but even a transitory narrowing of these limits, in other words, the highly inflated lungs cover up the real heart limits But after a short

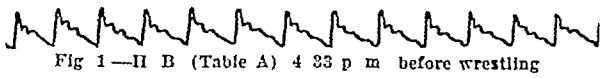

Fig 1—H B (Table A) 4 33 p m before wrestling

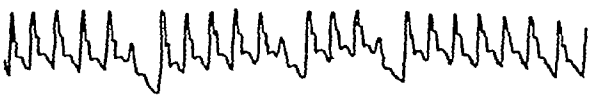

Fig 2—H B (Table A) 4 45 p m, after three rounds of severe wrestling

Fig 3—H B (Table A) 4 55 p m continued wrestling

Fig 4—H B (Table A) 4 56 p m renewed wrestling

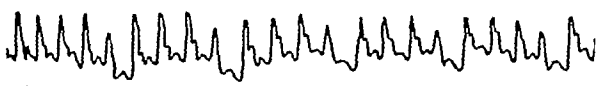

Fig 5—H B (Table A) 5 22 p m after severe wrestling with tightened belt

Fig 6—H B (Table A) 5 42 p m after 20 minutes rest

lapse of time (1 to 2 minutes) the real cardiac outlines appear, this proves that the extended dulness is not caused by a retrocession of the pulmonary margins, but that it corresponds to the real limits of the dilated heart-muscle itself When the wrestling is allowed to be continued in such a manner that dyspnea is produced along with cyanosis a further lowering of the blood pressure may be observed besides the increasing dilatation as well as a still greater frequency of pulse, respiration etc The heart sounds, however, remained clear in both experiments only in one instance was the first sound very dull at the apex

Since it has been proved by various authors among these v Frey and Krehl[3] that compression of the abdominal viscera with upward displacement of the diaphragm is of great influence on the amount of blood contained within the cardiac cavities, on the intracardiac pressure and on the activity of the heart in its entirety I have instituted a second series of experiments during which a belt was fastened about the bodies of the wrestlers below the costal arch and then tightened until they experienced the sensation of great constriction In the wrestler H B (Table A) the diaphragm was pushed upward in this way to the amount of 2 cm and in the wrestler F S (Table B) to the amount of 4 cm Even this simple lacing of the abdomen was sufficient to call forth dyspnea and tachycardia Especially the outward displacement of the apex-beat and the heart limits as they have been determined by my colleague and myself before the wrestling show how great an increase there was in the amount of blood in the heart cavities and how thus the clinical picture of acute dilatation had developed itself

When the further wrestling movements were carried out energetically enough to lead to dyspnea the apex-beat was displaced very materially outward in one instance even to the extent of 5 5 cm beyond the mammillary line Then the ventricles and especially the auricles (see heart tracings) expanded considerably, all this within a few minutes In the first case we have again an arrhythmic pulse in the second where I had to forbid severer wrestling on account of the greater cyanosis only the smaller amount of blood in the radial

Fig 7—F S (Table B) 1 35 p m before wrestling

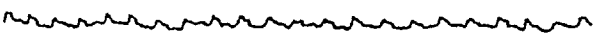

Fig 8—F S (Table B) 1 44 p m after 4 minutes severe wrestling and lifting

artery, along with regular rhythm, was observable And here it was worthy of notice, that at the time of greatest heart dilatation and most marked dyspnea with cyanosis, the first sound at the apex was not accompanied with a murmur, yet it could not be called definite, being rather somewhat dull at a period when the left auricle had become extended to the amount of 3 cm and the left ventricle to 2 cm, as compared to that which was already present during the pause, the wrestler still being laced

For more explicit data concerning the frequency of pulse and respiration, the blood pressure the heart extension etc I must refer to the accompanying tables and diagrams

All the symptoms gradually recede again in healthy and strong individuals With greater tightening of the abdomen and more intense wrestling, also when the dyspnea eventually with the cyanosis and concurrently with a strong dilated heart was very marked, it required considerable time for normal conditions to reappear, in some cases I was even able to note a few abnormalities of heart and pulse etc, after the lapse of two hours In other cases where the group of symptoms does not develop itself so forcibly it often happens that even after a short rest entirely normal conditions are re-established

Nowadays through sport carried on to excess we often have occasion to observe the effect of such excessive strainings on the heart and knowledge is here of great importance It was therefore of special interest to

3 In their Investigations on the Pulse they describe this fact in the following words When in animals with opened thorax the abdominal viscera are being pressed against the diaphragm the heart may be seen to arch itself high up during its rhythmic pauses the manometer in the artery showing a simultaneous increase of pressure The pressure on the abdomen must be even and not too strong otherwise the great influx of blood to the heart brings about irregular beats In the auricles especially a degree of repletion is easily attained which deprives them of the faculty of contracting or at least allows only incomplete contractions Ordinarily the rhythm of the ventricular beats is then also interfered with

to study more closely the influence cycling had on the heart To that effect I selected healthy, strong boys of the age of 13 to 15 years, who steadily bicycled, either on bad roads or on ascending grades or against strong winds Pulse tracings showed the markedly increased frequency of the pulse, though all the boys felt well subjectively In one case even we had arrhythmia, in another the pulse wave was very small or the elevation of elasticity scarcely recognizable Here and there the systolic ascension amounted to only about one-third of that which the curves showed before the bicycling, the blood pressure being lowered, the heart expanded either in one or the other, or in both directions exactly in the same manner as shown in my investigations with wrestling Here also all symptoms of heart insufficiency disappear in a short time after one single overstraining In healthy persons this occurs sometimes after a few minutes, but when, by continued excessive sport, these symptoms frequently recur, they naturally increase in intensity and in duration, and then lead to the well-known chronic overstraining

I also made such an investigation with a young bicyclist, 18 years old, who had a compensated mitral insufficiency I had him run 10 6 kilometers in fifty-two

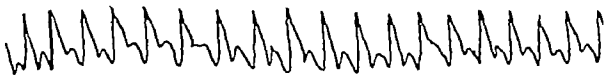

Fig 9 —Cardiac neurosis before bicycling

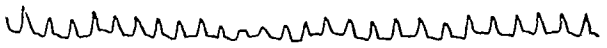

Fig 10 —Cardiac neurosis directly after bicycling

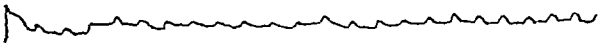

Fig 11 —Cardiac neurosis after 1 minute rest.

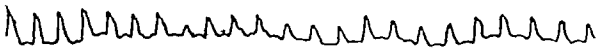

Fig 12 —Cardiac neurosis after 3 minutes rest

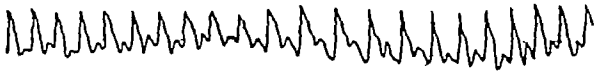

Fig 13 —Cardiac neurosis, after 15 minutes rest.

minutes on a bad, muddy road, here a still greater dilatation was manifested both to the right and to the left, this even persisted after one-half hour's rest

The tracings are shown (Figs 9-13) pertaining to a case of motor neurosis in a young man of 18 in whom rapid bicycling also caused a strong cardiac dilatation, a small pulse and strong palpitation, and even after fifteen minutes the sensation of cardiac fatigue had not entirely vanished

In recent years I have also tried to investigate acute heart straining by means of the Roentgen rays I have also succeeded, with the ordinary precautions in showing the changes of form already mentioned This procedure is easily carried out by means of the fluorescent screen These changes of form naturally disappear rapidly in healthy individuals

On the ground of their orthodiagraphic investigations, Moritz and Hoffmann denied these cardiac changes due to acute overstraining But the fact that for the purpose of carrying on their investigations they placed the subjects in a horizontal position and the uncertainty, whether this position was always exactly the same before and after the experiment make the method unreliable

Then the fact that the overexcited heart is able to undergo strong lateral deflections in the supine position also gives the possibility of error My experiments have been fully confirmed by the observations of Starck, Baldes, Heichelheim and Metzger regarding the influence of great bodily straining on the circulatory apparatus, the kidneys and the nervous system The last-named authors found that in persons from 17 to 27 years old, who had previously been examined and found to be healthy, the former normal heart limits had undergone a considerable expansion after a march of 100 kilometers, within one day and with hardly a rest, a few of them had not even resorted to the use of alcohol in any form The

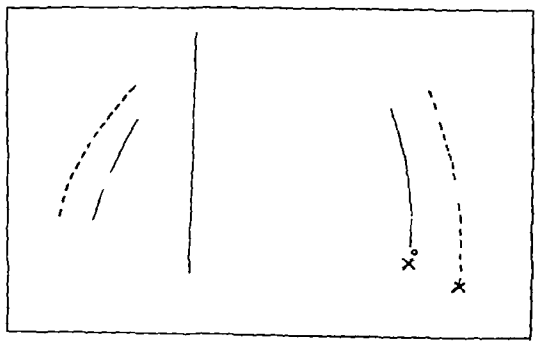

Fig 14 —Heart outline tracing of wrestler H B (Table A) Simple wrestling percussion with lateral limitation Solid curved line heart-outline before wrestling broken line, heart-outline after wrestling the x represents the perceptible apex beat

frequency of the pulse was markedly increased, and the blood pressure considerably lowered in all the subjects of experiment, in some cases even to the amount of 25 per cent

I trust I have proved by the above described experiments that acute overstraining of the heart really does occur, even in healthy individuals, in the latter this naturally disappears readily In what manner and how rapidly normal conditions may again be re-established is a matter which depends essentially on the elasticity of the tissues, on the compensatory arrangements gov-

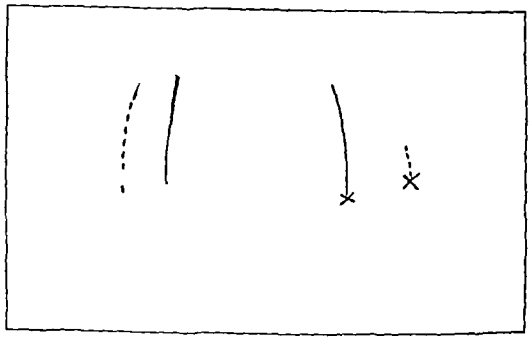

Fig 15 —Same as Fig 14 only ordinary percussion

erning the vascular system, etc Further experiments will have to determine what are the extreme limits of overexpansion of the heart, where the cardiac muscle has lost its normal capability of contraction According to my experience, these limits seem to lie far apart in the living muscle in healthy, and especially in young, individuals The same applies to the vasomotor compensatory appliances With older persons when the tissues especially the muscles, have lost a considerable part of their elasticity and the vascular walls have acquired a certain degree of rigidity another condition prevails Here one single and rather trifling overstraining may

call forth permanent deteriorations, as clinical histories illustrate And when further pathologic changes of the tissues, and especially of the heart itself, have taken place this organ becomes exposed to the dangers of overstraining to a still higher degree

When even a healthy heart may be injured by an acute overstraining, how much easier must this be the case in a heart-muscle which is already diseased or whose nutrition or innervation has already been interfered with by disturbances of all sorts

I was interested in knowing whether an acute overstraining of the heart was also possible in animals Professor Schutz, pathologic anatomist of the Veterinary College at Berlin, has made inquiries for me of several

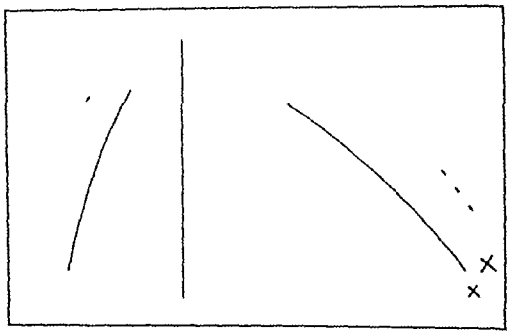

Fig 16—Heart-outline tracing of wrestler H B (Table A) Wrestling with tightened belt around abdomen, percussion with lateral limitation. Solid curved line, heart-outline before wrestling, broken line, heart-outline after wrestling, the x represents the perceptible apex beat.

pathologic anatomists and veterinary surgeons From the answers received and collated by me it is apparent that an overstraining of the heart does occur in animals, especially in horses and hunting dogs But the physical examinations of the heart in animals meet with so many obstacles and the clinical observations are so difficult that it is easily understood why conclusions in this matter differ so much Nevertheless so much may be gathered from all reports in question that overstraining in animals may also lead to dilatation of the heart and to

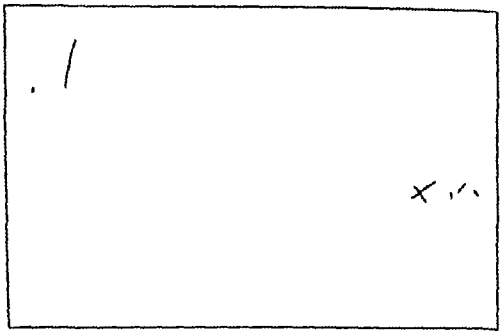

Fig 17—Same as Fig 16 only ordinary percussion

valvular insufficiency (mostly of the tricuspid, less frequently of the mitral valve) which later on may disappear entirely Irregular and unequal pulse and similar disturbances appeared in the same manner as in man

So far as exact investigations have revealed rupture of the aorta was always the cause of sudden death in horses during racing whereas an overdilatation of the heart-muscle never could be noted postmortem The latter instance seems to find an explanation in the fact that in race horses the heart-muscle shows an extraordinary degree of development, and it is certainly of interest to learn that the heart of an English full-blooded race horse weighed 13½ pounds, whereas the normal heart of a common horse nearly twice as heavy only shows a maximal weight of from 8 to 10 pounds Such a hypertrophied heart-muscle might easily be able to overcome even severe overstraining without being subjected to the dangers of overexpansion

The prognosis depends above all on the age, the degree of overstraining, the nutrition and the occupation of the patients as well as on pre-existing complications The more elastic the tissues, the better the nutrition and the care of the patients, the quicker will the disturbances disappear and normal conditions re-establish themselves Patients that are run down or are compelled to continually expose themselves to noxious influences, those also in whom valvular lesions, alterations of the heart-muscle, arteriosclerosis or other deteriorations are present, not only need a longer time for recuperation, but are also exposed to the danger that irreparable damage may be done

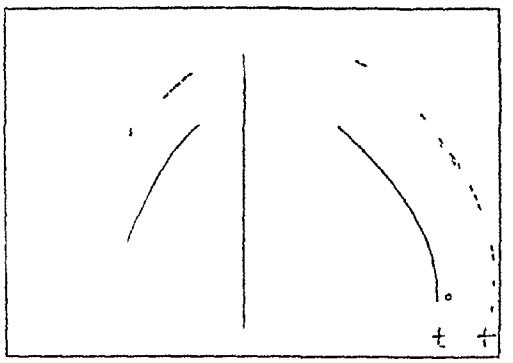

Fig 18—Heart outline tracing of wrestler F S (Table B) Simple wrestling percussion with lateral limitation Solid curved line, heart-outline before wrestling broken line heart outline after wrestling, the x represents the perceptible apex beat

As far as therapeutics are concerned it is hardly necessary to dwell on the fact that after an acute overstraining of the heart absolute rest is the first indication Even the simple raising of the body in bed may call forth an

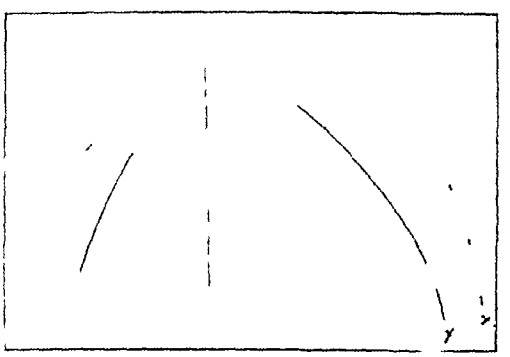

Fig 19—Same as Fig 18 only wrestling with a tightened belt around abdomen

aggravation When an examination of the posterior parts of the lungs is required this should be made in the lateral position Strong nutrition is always of importance

Among medicines digitalis takes the lead no substitute of any kind can approach it For quieting the action of the heart the application of ice or of sinapisms on the anterior pectoral surface is indicated It will hardly be possible to dispense with the use of morphin in order to alleviate the severe pains in the cardiac region, nevertheless it is advisable to be cautious in it

long continued use of large doses of this drug I have had many cases where I was able to dispense with morphin and to replace it with the application of heat All data concerning the above I have repeatedly given in some of my writings The use of stimulants is indicated in excessive cardiac weakness and in threatened heart failure

When by such therapeutic means we have succeeded in saving the patient from the threatening condition and when recovery from the injuries already present has taken place, it might be advisable to resort to tonics to counteract the heart weakness, this being liable to persist for a considerable time Here also a generous nourishing of the patient is one of the most important tasks of the physician A rational balneologic treatment, the careful use of gymnastics, suitable exercise in the fresh air, with the avoidance of any kind of straining, all come into consideration

I shall now give the clinical histories of a few cases bearing on the subject

Case 1 —Farm laborer, 24 years old, came to me in August, 1879 Excepting the measles, the patient claimed never to have had any illness, he disclaimed using spirituous liquors to excess He was of short, compact figure and gave the impression of being a strong man with well-developed muscles and but little adipose tissue About four hours before he came to me he had been busy lifting several heavy sheaves of wheat at a time with a pitchfork instead of only a lesser quantity, as he had been used to do These sheaves were heavy, even to raise from the ground, and when he came to lift them higher he had to drop them on account of sudden pains in the chest, dizziness, etc The man rested for a short time and tried to raise a smaller load, but this also was impossible, for not alone pain but palpitation of the heart and dyspnea interfered It even forced the patient to lie down Since the symptoms did not cease he came to me four hours later, led by a friend It took him about two hours for a walk of about twenty to twenty five minutes on a completely even road Walking sed great disturbance, and only with difficulty did he suc- l in mounting the stairs to my apartment The status as follows Facial cyanosis, marked dyspnea, small pulse i investigation of the thorax the strong ictus cordis was very striking, apex beat could be felt outside of the mammillary line The heart was dilated both to the right and to the left, heart sounds clear Patient was taken home in a carriage, was given digitalis absolute rest being enjoined and strengthening nourishment being prescribed The following day he only complained of palpitation and the second following evening he felt perfectly well, resting quietly in bed Objectively I found the heart action still somewhat increased, though two days later an examination again revealed normal conditions Nevertheless, the patient was not yet able to work because any kind of straining immediately called forth palpitation and shortness of breath, so that he left for home I never learned anything further about him

Case 2 —B F, aged 15¼, had always enjoyed good health and was said to have grown very rapidly of late It was claimed that he was insufficiently nourished, even while undergoing considerable mental straining, still he never complained of being weak or not being well For several years the patient rode a bicycle without noticing anything, in the beginning of the present year he began tricycling, which strained him considerably more Once in the beginning of this year, having ridden more than two hours on his tricycle, he complained of an attack of dizziness and claimed to have perceived a purring noise in the region of the heart. This, however, was said to have disappeared spontaneously in a short time A few days later he strained himself considerably by a long ride uphill on a steep and very bad road In consequence of this not only did that purring noise in the cardiac region recur during the ride but he experienced attacks of dizziness and fainting spells and had to dismount and lean against a tree In this condition he was found and it was only with assistance that he could find his way home The examining physician found a cardiac dilatation along with a systolic murmur at the apex, which, however, is said not to have been heard any more after a few days The patient is said to have been very pale in the early stages A few days later, when I first saw the young man, he complained only of dizziness In the examination the cardiac hyperkinesis was very evident, the heart being still dilated to the left to the extent of 1 to 1 5 cm With absolute rest and a strengthening diet, combined with slight resistance exercises, complete normal conditions set in within a few weeks, and with proper care he remained in good health, as was reported to me some months later

When we consider both of these cases we find that we have to deal with persons that had always enjoyed good health In the first of these cases one single stronger bodily straining sufficed to call forth dilatation, tachycardia, dyspnea, etc , in the second case these effects were produced by a preliminary smaller, followed soon after by a much greater strain, this being excessive for the youthful, mentally overworked and badly nourished organism Acute overstraining of the heart takes place *much more easily when the heart, through preliminary* or existing alteration of the total organism, has already been disturbed in its nutrition or innervation

Case 3 —F H, aged 18, was under my treatment from May 15 until June 27 Apart from measles at 8 years of age, she was always well until the previous year, when she complained of great fatigue, her physician diagnosing chlorosis This chlorosis improved, but did not disappear entirely She could climb hills without disturbances of any kind Four months ago the young lady danced all night, and she admits having been tightly laced and the hall having been oppressively hot. Sometimes during dancing she had a sensation of darkness before the eyes, she experienced palpitation and shortness of breath Nevertheless, and in spite of this group of symptoms constantly increasing in intensity, she only desisted from further dancing when she found herself compelled to drive home. The disturbances persisting, the following day the patient had to keep in bed. Her physician then noted the existence of a dilatation of the heart, and gave digitalis, also iron The condition improved, yet walking sufficed to again bring on palpitation and shortness of breath When I saw the patient there was still a dilatation of the left ventricle, amounting to 1 5 to 2 cm , some chlorosis was still present. With suitable baths and gymnastic treatment, a diet rich in albumin and fat, seven more weeks elapsed before normal conditions could be ascertained Since then the patient's health remained undisturbed She married and went through four confinements without the occurrence of any further heart trouble

Here also we find the one solitary severe straining calls forth the same group of symptoms, the essential difference being that this one single injury of the heart —and I have seen several such cases in chlorotic girls resulting from dancing—caused disturbances that lasted several months It certainly must be considered here that the long duration of those symptoms is to be ascribed in a great measure to the anomalous composition of the blood and, as evidenced by my experiments, to tight lacing It is not impossible that the narrowness of the aorta so often found in chlorotic patients and which by itself increases the labors of the heart may also be considered as a factor in the quicker production of cardiac overstraining

Of course, cases of overstraining of the heart are apt to be followed by much more serious consequences where a severe cardiac or valvular lesion already exists Such lesions often lead to long invalidism, sometimes even to rapid dissolution

Similarly to bodily straining strong emotional disturbances, especially fright, may also act suddenly on the heart Although I have at my disposal many clini-

cal histories of cases bearing on the subject, I must refrain from considering this matter any further at present, it being somewhat too far removed from my present theme I hope, however, to be able to report on this very interesting chapter in cardiac pathology

Clinical Notes

EXTENSIVE AVULSION OF SCALP

REPORT OF A CASE TREATED BY PLASTIC REPAIR AND FOLLOWED BY TETANUS WITH RECOVERY

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NEW YORK CITY

The case forming the text of the following communication illustrates certain points in the treatment of conditions which, while not frequently met, may and do occur in the practice of most surgeons, and, although no new principle is submitted here, the application of accepted ones deserves mention Following so closely on the excellent summary[1] of the treatment of tetanus with serum by Jacobson of Syracuse and Pease of Albany, a discussion of greater length in this connection would burden unnecessarily the literature and serve no useful purpose In looking over the cases forming the basis of Jacobson's and Pease's work, it would appear that they, like all of us who compile and deduce from the publications of others, were confronted with the fact that most important details are lacking in the reports of cases submitted by the various authors, and if this contribution seems somewhat protracted it must be ascribed to my desire to escape the fault of inaccuracy which may be the outcome of an effort to be brief

Patient—B S, aged 7, was admitted to Harlem Hospital July 16, 1906

History—On the day of admission the patient had been knocked down by a trolley car, the fender of which pushed the lad along for a considerable distance, his head was ground along the rail and the scalp torn off from the left side of the skull

Examination—This disclosed a denuded area measuring about four by five inches The wound was symmetrically egg shaped and the periosteum corresponding to the surface indicated was also avulsed The edges of the wound were deeply stained with the mixture of mud and grease which covered the street in the vicinity of the car rails There were many contusions over the entire body, but at no place, other than the scalp was the skin broken There was considerable shock, but no evidence of cerebral involvement and no bones were broken Reaction from shock was rapid and complete in a few hours

Operation—The wound was cleansed and dressed in the usual manner and eight days after admission a plastic operation for repair of the scalp was made The entire wound fortunately was within the hair area of the scalp, and permitted of the application of a flap sliding method practiced by Volkmann and Messner A study of the accompanying illustration will make the method employed sufficiently clear to render unnecessary further attempt at elucidation in the text Mention may be properly made here however that early plastic operative effort in injuries with considerable loss of substance is a wise measure and should perhaps be more frequently performed than is usually done More especially is this the case when ultimate cosmetic effect plays an important part in the problem presented In this instance the flap were all taken from portions of the hairy scalp so that when healing had taken place there was no visible evidence of the injury In this case delay may have seemed permissible on the ground that necrosis of bone would be the result of the loss of periosteum It is, however, to be remembered that the external table of the calvarium is supplied with nutrition by the diploë and that extensive necrosis rarely follows even severe and extensive injuries to the scalp and periosteum In deed, this is what happened in our case if the rapid repair of the injury is to be regarded as an indication of the absence of this complication There were no disturbances of importance following the operation and repair seemed to progress satisfactorily

Postoperative History—On August 3 nineteen days after receipt of the injury the patient complained of pain in the throat and inability to open the mouth fully Up to this time the rectal temperature had been about 99 5 F and indeed showed no increase at this time but the pulse rate which had up to this been about 80 per minute rose to 98 The latter symptom we regarded as indicative of the first expression of toxemia

The following day the mouth was firmly closed but could be opened sufficiently for the purpose of taking food While protruding the tongue for inspection a spasm of the muscles of mastication caused the tongue to be bitten The pulse rate remained near 100 but there was still no rise of temperature beyond that mentioned

August 5 about forty eight hours after the first manifestations the temperature rose to 103 F and several convulsions of moderate severity occurred in rather rapid succession the rigidity extended to the entire body and the pulse rate rose to 128 per minute There was no disturbance of cerebration The wound which up to this time had been healthy, lost its bright red color the granulations looked flabby and there was some secretion but no pus discharged from the raw surfaces The line of union of the flaps remained firm however and did not at any subsequent period break down I concluded that this was a clear case of tetanus which because of the long period of incubation (nineteen days) its gradual development and rather moderate expression would probably run a rather favorable course On this day the house surgeon administered antitoxin in two injections of 7 c c each into the buttock and one injection of 10 c c into the spinal canal In the latter instance about an equal amount of spinal fluid was previously withdrawn During the night an injection of 20 c c into the spinal canal was made

August 6 the rectal temperature was about 103 F, and the other symptoms about the same There was rigidity and occasionally a slight general muscular spasm but the mouth could be opened for nourishment Twenty c c of the antitoxin were injected into the spinal canal

August 7 Dr S J Meltzer saw the case with me The temperature was still about 103 F and the pulse rate 138 per minute There was rigidity of all the muscles but no distinct opisthotonos The mind was clear there were some sordes on the lips and the cornea was dull The patient at this time had received 14 c c of the antitoxin injected into the buttock and 50 c c injected into the spinal canal in four days I had Dr Meltzer see the case with the view of determining the advisability of making injections of magnesium sulphate solution into the spinal canal

Following the publication of Meltzer's experimentation with magnesium sulphate injections into the spinal canal for the purpose of producing anesthesia and my own observations on human being Blake of New York City had used the salt in tetanus and found that spasm was controlled as the result for from twenty nine to thirty seven hours

After examining our case it was concluded that there was no special indication for the use of the magnesium sulphate as spasm was not a marked symptom and that if any unfavorable outcome was to be anticipated it was probably more [illegible] result of a general enfeebling toxemia which [illegible] fered with metabolism and not as the outcome of a [illegible] effect on the central nervous system It is this [illegible] which perhaps make the report of this case [illegible] us are inclined to look at our cases from the [illegible] what generally happens and may thus be led [illegible] measure which has a distinctly [illegible]

1 Ann of Surg September 1908

of a certain kind, when in a particular instance the special indication lies in another direction

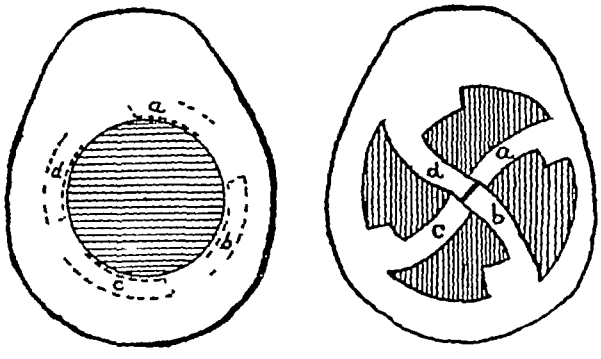
Dr Meltzer suggested giving one intravenous injection of 200 c c of antitoxin on the theory that it was through the circulation that we should attack the disease At the same time it was borne in mind that the blood already contained an antitoxin of its own creation, and that this rather heroic dose should not be repeated hastily, for fear of poisoning the patient with antitoxin. Accordingly, the patient was placed under chloroform narcosis, the median cephalic vein was exposed and 200 c c. of the antitoxin slowly and carefully injected into the circulating fluid That evening the rectal temperature had fallen to 99 F and the pulse was 96 per minute The next day the patient had no spasm and the muscular system was less rigid.

August 9, forty eight hours after the intravenous injection, a slight convulsion occurred and the jaw became very rigid again The symptoms, however, were not alarming

August 10, three days after the intravenous injection, there was considerable rigidity and a more severe spasm Twenty c c. of antitoxin were injected into the spinal canal, the general condition was about the same

August 11 the wound was dressed and appeared healthy The patient had been very quiet, but when disturbed had a distinct opisthotonos Twenty c c of antitoxin were injected into the spinal canal

By August 14 there was still some rigidity, but no spasm for forty-eight hours Trismus still persisted, but the general condition was favorable, the pulse was between 90 and 100 per minute and the patient took nourishment by mouth



Volkmann's Plastic Repair of Scalp (From Tillmann's Surgery)

August 15 (the twelfth day of the disease) the patient had a convulsion and his temperature rose to 104 F, with the pulse 124 An intraspinal injection of 20 c.c. of antitoxin was given, and during the night the temperature dropped to normal

From that time on the patient's condition gradually improved, although there was some trismus which persisted for several weeks after he was up and about. No more antitoxin was given

Throughout the treatment the patient received 14 c c. of antitoxin into the muscles, 100 c c into the spinal canal and 200 c c. into the venous circulation

The wound of the scalp healed completely, without untoward symptoms, beyond the unhealthy appearance alluded to, which occurred when the toxemia was perhaps at its height This is probably ascribable to the modification of nutritive processes which occur during a toxemia

The case may be regarded as teaching us that early plastic repair in extensive loss of substance is a wise measure, that, when muscular spasm is not a marked symptom, magnesium sulphate need not be administered and that in a certain class of cases, such as is represented in this instance, the toxin of the disease may be counteracted by the introduction of a considerable quantity of antitoxin directly into the blood current

616 Madison Avenue

MODIFIED CRILE ARTERY CLAMP,

PERMITTING BOTH SCREW AND DIRECT PRESSURE ADJUSTMENT

FREDERIC WADE HITCHINGS, S B, M D
CLEVELAND

The fact that the temporary closure of blood vessels by means of instrumental compression requires careful regulation of the pressure employed is fully recognized in the idea embodied in the Crile artery clamp In this instrument the pressure brought to bear on the vessel is regulated by means of a small thumb screw acting against a spring resistance In order either to apply or to remove this clamp the thumb-screw must be turned several times, the number depending on the size of the vessel and the thickness of its wall This is the antithesis of the non-adjustable spring clamp commonly used in experimental work which may be instantly applied or

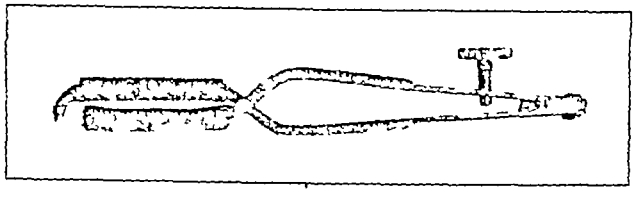


Fig 1—Showing position of the jaws with the thumb screw loosened

removed by compressing it with the thumb and forefinger, but which always has the same pressure whether too strong or too weak, and which is, therefore, entirely unsuited to clinical work.

As a result of clinical observation and of work on transfusion of blood done in Dr Crile's laboratory, it occurred to me that it might be possible to construct a clamp which would combine the screw adjustment of the Crile clamp with the more rapid adjustment of the laboratory clamp The illustrations show such a clamp as made from my model by the J C Ulmer Company of this city

When the thumb-screw is loose there is lack of approximation of the jaws and hence no pressure is exerted

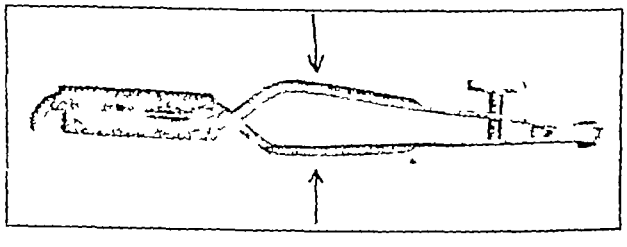


Fig 2.—Showing the thumb screw tightened and the jaws pressed together The arrows indicate where the pressure is applied by thumb and forefinger to release the jaws

(Fig 1) Then if the thumb-screw be tightened pressure will be exerted by the jaws on a vessel lying between them which will vary with the extent to which the screw is made to impinge on the opposite jaw (Fig 2) Finally, when this degree of pressure is obtained, the clamp can be instantly released and removed, *without loosening the screw*, by pressing the jaws together with the thumb and forefinger at a point between the screw and the blood vessel

When the clamp is once adjusted to a given vessel so as to exert force enough to prevent the flow of blood through it without injuring the vessel wall, it is permanently adjusted to that vessel, and may be removed and

replaced with no fear of injury or of insufficient force being exerted This will be appreciated when, for example, an anastomosis by Carrel's method has been completed and it is desired to test the connection before finally allowing the blood to pass from vessel to vessel It is very true that it does not take long to do this with the Crile clamp, but the shortening of an operation even by seconds is to be desired, and, whereas in replacing the Crile clamp in a hurry an inexperienced operator may apply too much pressure, this can not be done with the modified clamp if properly adjusted in the first place

Euclid Avenue and East One Hundred and Fifth Street.

A CASE OF BILATERAL BEZOLD MASTOIDITIS FOLLOWING ANGINOUS SCARLET FEVERS *

ADOLPH O PFINGST, M.D
LOUISVILLE, KY

The following case presents so many clinical features of interest that a full report seems justifiable

History—When I first saw this child the following history was obtained from the family physician A girl, aged 11, previously healthy, began, on the third or fourth day, after the onset of a well developed scarlatinal eruption, to show signs of involvement of the nasal, pharyngeal and faucial mucous membranes Several days later the patient began to complain of pain in her left ear and on the following day both ears were discharging pus

Examination—There was marked involvement of the mucous membrane of the upper respiratory tract, especially of the nose The turbinates were swollen, blocking the nares They were bathed in a yellowish pus, which had caused an excoriation of the nostrils and skin beneath A stringy muco-pus could also be seen on the posterior pharyngeal wall. Both faucial tonsils were enlarged and partially covered with a thin grayish yellow deposit A peculiar disagreeable odor was noticeable, emanating from the mouth and nose of the child There was no glandular enlargement at the time A rather thick pus was discharging from both ears through large openings in the posterio-inferior quadrant of the drums There was no swelling of the ear canal nor over the mastoid and no tenderness over the bone. Temperature 99 5 to 100 5 F The urine was normal Owing to the obstruction, nasal respiration was interfered with The enforced mouth breathing added to the discomfort of the child by causing a dryness of the buccal mucous membrane There was some pain and considerable difficulty in deglutition

Treatment—The mucous membranes of the nose and throat were treated by spraying with a warm carbolic solution, the nasal passages being previously opened by the use of cocain The tonsils were swabbed with a solution of potassium permanganate and potassium chlorate, and the ears were irrigated every two hours with a warm saline solution under low pressure The child continued to have from one to one and a half degrees of fever She grew weaker and more emaciated daily, but showed no other symptoms, except the enlargement of the lymphatic glands of the neck In two weeks the swelling had reached considerable proportions Three weeks after the beginning of the otorrhea, the patient complained for the first time of pain in and behind the right ear, the left one being unchanged. She had been growing more irritable and resented any effort to manipulate the glandular mass Pressure over either bone did not seem to elicit pain. There was slight swelling just at the tip of the mastoid which was apparently part of the general swelling of the neck. There was no swelling over the region of the mastoid antrum and no sagging of the superior posterior wall of the external auditory canal On the following day, however, there was decided swelling over the lower end of the bone, so that an operation on the right side was decided on

Operation—The conditions found were interesting No pus was present external to the bone The antrum was rather large and was filled with foul pus After cleansing this and removing the neighboring diseased cells and curetting the aditus, I was about to dress the wound when, with the searcher a small rough area was detected low down on the median side of the bone cavity The removal of this area led to several apparently healthy cells and their removal uncovered another pus cavity When this was thoroughly exposed by the removal of overhanging ledges of bone, a small opening was found leading into the digastric fossa, from which a small quantity of pus exuded when pressure was made below the tip The entire tip was removed and the case dressed in the usual manner Although the only symptoms of mastoid involvement noted on the left side were slight swelling and questionable tenderness An exploratory operation was decided on Conditions prevailed almost identical with those on the other side. Pus had not perforated the outer table of the bone The rather large and superficial antrum was full of pus and communicated through several smaller diseased cells with a smaller pus cavity This in turn was found to communicate by a small opening with the digastric fossa. The mastoid tip was removed entirely on this side also and the wound treated as it was on the right side Both wounds closed in seven and one half weeks and the drums were restored. The hearing, two months later, had returned to almost normal and the child is the picture of health, the glands in the neck having almost disappeared

This case exemplifies the destructive nature of middle-ear abscesses complicating scarlet fever of the anginous variety The other feature of interest was the development of the mastoid abscess with few or no symptoms It would be impossible to determine how long the perforation into the digastric fossa had existed before the operation The swelling and tenderness along the sternomastoid muscle characteristic of Bezold mastoiditis were entirely obscured by the marked glandular swelling in the neck It is rather infrequent that the mastoid operation is demanded on both sides at once and a unique condition that both had perforated into the digastric fossa, especially in childhood when the antrum is superficial and situated high up

* Read before the Jefferson County Medical Society Feb 1 1907

A HOSPITAL SIGNAL SYSTEM

P C H PAHL, B S, M D
LOS ANGELES, CAL.

In October, 1904, I devised, for the Hospital of the Good Samaritan a signal system for calling nurses to patients, which has the following advantages

1 Noiseless There being no bells, the call is absolutely silent

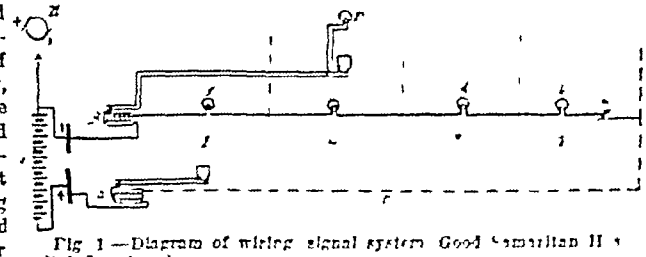


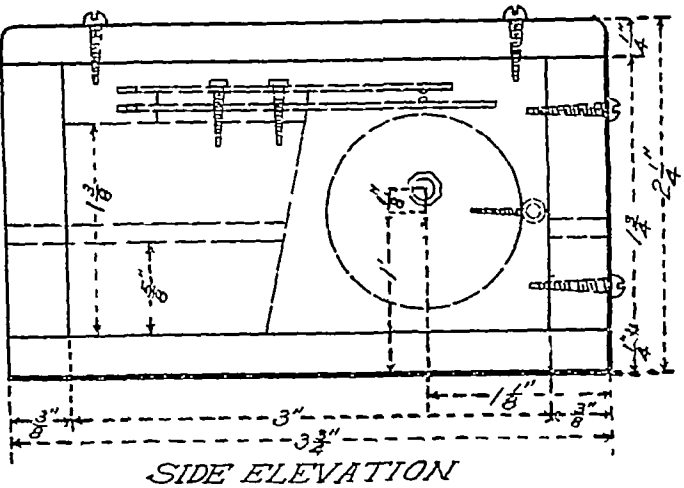
Fig 1—Diagram of wiring signal system Good Samaritan Hospital Los Angeles

2 Monitor board This is in the office of the superintendent of nurses and enables this officer or her representatives to observe each call for the [illegible] thus making it possible to see at a [illegible] of patients desiring the same [illegible] length of time elapsing [illegible]

3 Lights in the corridors These are placed above the door of each patient's room, making it possible for the nurse, if she happens to be in the vicinity, to observe and answer the call without having to go to the indicator in the nurse's room

4 Lights in the rooms These are placed in such a manner that they may be readily observed by the patients, who may thus know, when attempting to signal for a nurse, whether they have been successful or not

5 Specially constructed switches These are placed in the rooms in connection with the lights and are operated by means of two cords One of these cords passes through hollow moulding substituted for ordinary picture moulding, and leaves the moulding at the side of the bed, being so arranged as to be readily grasped by the patient who pulls it, thus closing the switch and putting on the signals The other cord is placed in such a position that, while it is impossible for the patient to reach it from the bed, it is easily accessible to the nurse as she enters the room Pulling this cord restores the switch and indicates that the call has been answered



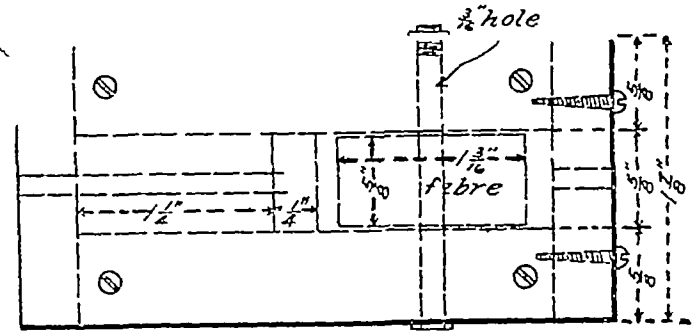


Fig 2 —Switch for signal system

6 Signal boards The hospital is divided into five distinct departments each under the charge of a head nurse who has her headquarters in a nurse's room In each of these rooms is placed a signal board which contains the number of each patient's room in that department so that only those calls are registered.

7 Pilot lights Each department has its subkitchen in which is placed a pilot light which lights with every call in that department thus enabling the night nurse, who spends considerable time in the subkitchen preparing diets, to observe when some one is signaling On the ceiling at the intersection of the cross hall is placed another pilot light which lights simultaneously with the one in the subkitchen, this light is visible from any point in the halls of an entire department

Figure 1 is a diagram of the wiring, *a* represents the switch (Fig 2) located in the patient's room, *b* the light in the patient's room, *d*, the light in the corridor, *e*, the light on the signal board in the nurse's room, *f*, the light on the monitor board in the office of the superintendent, *g* is a relay in the common return to the signal board in the nurse rooms Each time a call is made in that department this works buzzer *B* and pilot light *P* in multiple with it *h*, located on the monitor board, is a relay in the common return of the entire system and causes buzzer *c* to operate when a call is made from any room in the entire hospital The buzzers *B* and *c* are ordinarily not used, the pilot lights and the lights on the monitor board being sufficient. *m* is the common return and *n* the source of energy, which may be anything over fifty volts and which charges the storage battery *i*

Figure 2 represents a specially constructed switch, the body of which is made of wood in which the two terminals are platinum points mounted on two German silver springs The contact is made by causing a fiber cylinder to revolve on an eccentric of one-eighth of an inch

This system has been in operation over two years and has proved to be a great help in giving prompt, efficient and noiseless service Concerning the source of energy, if direct current exists in a hospital, the storage battery may be charged through a bank of incandescent lights, if only alternating current is available, however, it is necessary to install a small motor generating set with which to charge the batteries

934 West Seventh Street

THE INFLUENCE OF ALCOHOL AND CHLOROFORM ON PHAGOCYTOSIS *IN VITRO* *

GEORGE RUBIN, M D
CHICAGO

In a previous communication[1] I have shown how the natural defenses of the animals employed in the experiments were lowered or suspended when subjected to thorough narcotization In the several series of experiments it was noted that the narcotized animals reacted poorly to various infections artificially produced It was also shown that the recovery or death of the rabbits depended apparently on the condition of the leucocytes Narcotized rabbits when infected showed a hypoleucocytosis of various degrees, whereas the controls usually showed a pronounced leucocytosis which was followed by complete recovery or at least survival of their narcotized fellows by a considerable space of time

These phenomena suggested the possibility that the narcotics had a deterimental influence on the phagocytic function of the leucocytes It was also shown that there is a more active intraperitoneal phagocytosis of carmine granules in normal than in narcotized animals

It was now thought advisable to study the effect of narcotics on phagocytes *in vitro* The technic employed is as follows

* From the Pathological Laboratory of Rush Medical College University of Chicago

* Read before the Chicago Medical Society March 27 1907

1 Influence of Alcohol Ether and Chloroform on Natural Immunity in Its Relation to Leucocytosis and Phagocytosis, Jour Infect. Dis May 30 1904

Suspensions of various bacteria, especially staphylococci, pneumococci and streptococci, are added to defribinated dog blood containing alcohol or chloroform in varying proportions (table), the tubes are then carefully corked and placed in the incubator at 37 C for 30 to 40 minutes Then smears are made and the bacteria in leucocytes counted and averaged In every case control experiments were made with mixtures of normal blood and bacteria

EFFECT OF ALCOHOL AND CHLOROFORM ON PHAGOCYTOSIS IN VITRO

No of Experiments	Degree of dilution of Alcohol or Chloroform	Bacterium	Phagocytosis Average number per Leucocyte	
		Series I—Alcohol		
No 1	1 to 1000	Staphylococcus	5 5	4 5
No 2	1 to 500	Staphylococcus	14	25
No 3	1 to 400	Streptococcus	2	4
No 4	1 to 300	Pneumococcus	3	11
No 5	1 to 200	Pneumococcus	1	7
No 6	1 to 100	Pneumococcus	4	26
No 7	1 to 50	Pneumococcus	0	5
		Series II—Chloroform		
No 1	1 to 2000	Streptococcus	12 5	14
No 2	1 to 2000	Staphylococcus	9	15 5
No 3	1 to 500	Pneumococcus	4	10 5
No 4	1 to 400	Pneumococcus	2 5	6 5
No 5	1 to 300	Pneumococcus	2	8
No 6	1 to 200	Pneumococcus.	0	20

We see that 1 to 50 of alcohol and 1 to 200 dilutions of chloroform suspend phagocytosis *in vitro* completely With the necessary dilutions there is an increase of phagocytosis, which, however, does not always appear to be proportional and the effect of the alcohol is practically lost at a dilution of 1 to 1000 and chloroform at 1 to 2000

I will quote the work of Moore and Roaf[2] on the mode of action of the narcotics on the cells, which seems to agree with the results obtained in these as well as in my previous experiments

From their numerous and ingenious experiments, these authors conclude that chloroform forms an unstable chemical aggregation with the proteids experimented with, and that it is carried on in the blood in such a state of combination

Since proteids build up the protoplasm of the living cells it appears to be probable that chloroform and other anesthetics must form similar combinations with protoplasm, and that anesthesia is due to the formation of such compounds which limit the chemical activities of the protoplasm The compounds are unstable and remain formed only so long as the pressure of the anesthetic in the solution is maintained

The action of the various anesthetics occurs not only with nerve cells but with ciliated and other epithelial cells with muscle cells of all types, with bacteria, with amœba and with unicellular organisms

In all these varied types of living cells activity decreases alike with increasing dose of the anesthetic, and with sufficient concentration all signs of life become obliterated

Hence the action of the anesthetic must be due to some change brought about in the only material which is uniformly present in all these types of cells, that is the cell protoplasm

We can easily see from the foregoing explanations how the phagocytic function of the leucocytes may be suspended or entirely destroyed by the toxic agents in question

It was shown in the previous communication how alcohol ether and chloroform alike affected the natural defenses of rabbits to various infections The prominent rôle the leucocytes appeared to play in connection with their immunity was also pointed out

With the experiments *in vitro* recorded in this paper together with the excellent work of Moore and Roaf we can conceive more clearly the influence of anesthetics on cell life in general and particularly on those cells which interest us most at this time—the phagocytes—both the fixed and circulating The influence of the agents in question on the opsonins has not been studied so far The behavior of the phagocytes in my experiments with inert substances (carmin granules) proves that so far as the above experiments are concerned the opsonins seem to play no rôle at all

In conclusion I desire to thank Professor Hektoen for his invaluable suggestions and courtesies

2 Proc Royal Soc vol lxxiii

DEATH FROM ACETANILID POISONING

A I SMEDLEY, M D
HAMILTON OHIO

Patient—F H H male aged about 29, height 5 feet 11 in, weight about 190 pounds

History—When I returned to my house at 12 30 p m, I found that the patient had been waiting for me about thirty minutes During that time he had vomited twice and had asked for smelling salts, as he felt very ill I found him very weak and cyanotic with a slow pulse and slow and shallow respiration He stated that he had an intense headache and asked for something to relieve it From the symptoms and general appearance of the patient I suspected acetanilid poison ing and asked him how many headache powders he had taken He stated that he had taken three between 9 and 12 o clock and that his headache became worse after each dose

Treatment and Result—I administered 1/20 gr strychnin nitrate with 1/60 gr atropin sulphate and told the patient to let me know how he felt in thirty minutes The man left my house and walked home—about two blocks As I did not hear from him in thirty minutes I left for my office and as soon as I got there I received a telephone message asking me to go to him at once as he seemed worse I found him weaker and more cyanotic, with cold extremities and a pinched look The respirations were almost imperceptible the man scarcely breathed unless roused and told to breathe deep At 2 p m I gave 1/20 gr strychnin nitrate 1 50 gr digitalin, and 1/100 gr nitroglycerin hypodermatically The man was given a hot pack, the feet elevated and cold applied to the head He was also given 20 drops of spirits of camphor in a teaspoonful of whisky every half hour

I called Dr F M Barden in consultation about 4 p m At that time the man was in a severe convulsion and very cyanotic the pulse was very weak The convulsion lasted about ten minutes when edema of the lungs developed and death ensued at once

Postmortem—Autopsy the following day showed edema of the lungs dilatation of the heart and congestion of the kidneys—a condition of acute cloudy swelling All other organs were normal There were about twelve ounces of urine in the bladder and examination showed marked traces of albumin

The man's wife stated that he had not been feeling well for three or four days and it is possible I think that he had suffered from grip which left an acute nephritis

The powders in question were put up by a local druggist who informed me that each powder contained [illegible] mild [illegible] grains citrate of caffein [illegible] grain and [illegible] dium bicarbonate 3 grains The amount of acetanilid taken by the patient therefore was only [illegible] grain [illegible] the powders caused nausea and vomiting within an hour after he had taken them and his headache [illegible] worse

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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[For other information see second page following reading matter]

SATURDAY, APRIL 27, 1907

EFFICIENCY IN HEALTH ADMINISTRATION

It is a significant sign of the times that the New York Academy of Medicine has established a section on Public Health In an address[1] delivered at the opening of this section Dr George A Soper discusses the sanitary engineering problems of water supply and sewage disposal for New York City and certain other matters of general interest He points out that authentic sanitary information is now desired by the public, but that it is difficult to obtain it, in the first place, because great universities have neglected to teach in an adequate manner sanitary science or preventive medicine, and, secondly, because physicians do not fully recognize their importance as sanitary teachers For these reasons, a vast amount of technical knowledge has not been popularized sufficiently and public opinion has not been directed to the proper consideration of many topics relating to public health One of the functions of the new section, therefore, must be to assimilate data and to help in the more rapid diffusion of knowledge in sanitary matters

Unquestionably there is much of truth in what Dr Soper says concerning the failure of universities and physicians to teach sanitary knowledge It should be remembered, however, that a great deal, indeed a remarkably great deal, of efficient work in this very line has been done and is being done by institutions of various kinds as well as by physicians individually The reason, or, rather, one highly important reason, why the public has not profited to the fullest extent from the available sanitary knowledge seems to lie in the general failure under our political system to secure as public officials men with the necessary special training and expert knowledge This, of course, is true not only with respect to health officers of various kinds, but to an equal degree with respect to many other departments of public service

In our political life it is unfortunately the usual thing that men are installed for a brief period in important positions for the efficient exercise of the duties of which they are fitted neither by experience and training nor special natural gifts One consequence is that while the established routine work of various offices may be carried on in a fairly satisfactory yet often crude way, new and progressive policies in harmony with changing conditions and increasing knowledge are not introduced so promptly as they should be and the necessities of the future and of more or less unexpected emergencies are left without adequate provision It is only too true, as Soper says, that "thus far, in the history of sanitation, the great strides of progress have usually resulted from emergencies Unfortunately this method of progress still prevails to a large extent through the country" In evidence of the truth of this statement it is necessary to mention only the sudden changes in water supplies so often precipitated by avoidable and predictable epidemics of typhoid fever

Progress in other branches of public service also commonly seems to proceed from analogous causes The better way, and the way more likely to be followed when departments of public service are managed by men with special training and expert knowledge, is to make the schemes necessary for improvement while there is ample time for careful investigation and preparation Hence, public opinion and the attention of those with appointive powers should be continuously directed toward the vital importance of special, technical qualifications in our public services This applies with especial emphasis to the departments charged with public sanitation, because in their particular case prevention is the peculiar function, and the conditions to be prevented must be foreseen and removed so far as possible before they result in disease "The highest skill and wisdom are none too great to enlist" in the practical application of technical knowledge derived from diverse sources in order to prevent disease and to render human life pleasant and healthful The city of New York is able to furnish us a fortunate example in the way of efficiency in health administration

1 Science April 19 1907 p 601

TYPHOID FEVER IN THE DISTRICT OF COLUMBIA

There have been few greater surprises to sanitarians than the singular prevalence of typhoid fever during the past year in the District of Columbia In the autumn of 1905 a modern sand filter, designed by and constructed under the supervision of some of the most eminent sanitary engineers in this country, was put in operation in the city of Washington The particular mode of treatment adapted for the water of the Potomac River, the character of the plant and the details of operation had been long and thoroughly discussed and studied by qualified experts It was confidently expected, therefore, that the operation of this filter would be followed by the same results that have been observed in Lawrence, Mass, Albany, N Y, and other places in this country where a filtration plant of similar character has been installed Surprise and consternation resulted when, in July, 1906, the number of cases of typhoid fever in Washington suddenly increased so that the disease was regarded as prevailing in epidemic form Since the Potomac River water had long been known to be polluted, and since sand filtration elsewhere had

been shown to purify effectively waters of a similar character, the recurrence of the disease under the greatly improved conditions was a matter of keen disappointment to both the medical profession and the public at large

In view of these rather extraordinary conditions, a commission was appointed by the Surgeon-General of the Public Health and Marine-Hospital Service, comprising a number of capable officers of the Hygienic Laboratory and the Public Health and Marine-Hospital Service. In fact, during the summer of 1906 almost the entire force of the Hygienic Laboratory concentrated its energies on this problem

The investigation included A sanitary survey of the Potomac watershed, a searching epidemiologic study of the 866 cases of the disease occurring in the District of Columbia between June 1 and October 31, 1906, daily chemical and bacteriologic examinations of the public water supply, a special study of the pumps, wells and springs in the District and also of the bottled waters on sale in Washington, inspection of dairies and laboratory examinations of the milk supply, inspection of ice factories and analyses of the water from which the ice was made as well as of the ice itself Special attention was directed to the communicability of the disease from person to person by direct or indirect contact The agency of flies and other insects as carriers of infection was a subject of special investigation

As a result of this comprehensive study certain conclusions and recommendations were arrived at by the board of commissioners, which will soon be printed in a bulletin of the Hygienic Laboratory, an advance copy of which has been sent to us through the courtesy of Surgeon-General Wyman Only a few of the findings of the commission can be mentioned here The commission notes in the first place that the prevalence of typhoid fever in the District of Columbia during the period covered by their investigation was due to several causes, about 15 per cent of the cases being imported, 10 per cent being attributed to infected milk and 6 per cent to contact, leaving 69 per cent unaccounted for Particularly interesting, in connection with the contact cases, are the observations on the inefficiency of measures for the disinfection of the discharges from the bodies of typhoid fever patients The report of the commission is definite and emphatic on this point "The destruction of the infection as it leaves the body is the most important measure to prevent the spread of typhoid fever In our opinion it is the duty of the attendant physician to see that these measures are effectively carried out It is evident from the above figures that this important prophylactic measure is not carried out as it should be in the District of Columbia If this condition of affairs can not be corrected then we should recommend its enforcement by legislative enactments"

We have more than once had occasion to call attention to this important subject There is no reason to think that in this respect physicians of the District of Columbia are less insistent than physicians of other cities in having the details of prophylactic disinfection carried out. The warnings of the commission can not be too often repeated and insisted on There can be no doubt that rigorous disinfection would diminish enormously the transmission of typhoid fever, although in view of the recent developments regarding bacilli carriers it is certainly not fair to assume that the disease would completely disappear if known cases are properly disinfected and cared for

Another thoroughly investigated question was the milk problem and the report of the commission on this subject is explicit and well considered Although the evidence that was secured indicated that not more than 10 per cent of the cases studied were due to infected milk, the commission does not hesitate to state that "While the present outbreak of typhoid fever is by no means wholly attributable to milk, the wonder is, judging from our observations of the milk business in the District of Columbia, that more illness and disease is not spread through this medium"

One of the most interesting sections of the report discusses the probable relation of the public water supply to the recent epidemic, and a number of arguments in favor of the view that the filtered Potomac water played an important part in the dissemination of typhoid fever are marshaled in an impressive manner On the other hand, reasons in favor of the view that the Potomac water had little, if any, share in the dissemination of typhoid fever in Washington are likewise considered This perplexing matter is summed up finally as follows "In view of the foregoing, it is evident that at present it is not possible to present satisfactory proof of the part played by the Potomac River water in the spread of typhoid fever in the District of Columbia, therefore the commission reserves final decision on this subject until investigations now in progress at the Hygienic Laboratory, have been completed"

While this verdict leaves the country in suspense as to the actual situation in Washington, it seems to venture about as far as is warranted by the evidence presented in this report, and it certainly has not been proved that the filtered water supply was responsible for the recent epidemic The weight of evidence that has been accumulated in connection with the installation of successful filtration plants in other cities would seem rather to throw the burden of proof on the other side Some stress has been laid in the report on the seasonal incidence of typhoid fever in Washington, the disease being here as in many other places peculiarly a summer infection The coincidence of the maximum amount of typhoid fever with the prevalence of the house fly has not been overlooked but we believe that even more significance might be attributed to this point On the other hand the hypothesis of an increased susceptibility to typhoid fever in warm weather has something to recommend it, especially in view of the seasonal [illegible] of infantile diarrh[illegible] which [illegible]

ceptibility doubtless plays a rôle. Inconclusive as the report is, it must certainly take rank as one of the most thorough and extensive studies of an outbreak of typhoid fever, not due to water pollution, that has ever been made. That the Washington situation is still a puzzling one is in no wise the fault of the authors of this important document, but is rather due to our incomplete epidemiologic knowledge.

CATERPILLAR RASHES

The introduction of the brown-tail moth, *Porthesia chrysorrhœa*, into Massachusetts and New Hampshire, and its almost certain spread into neighboring states, needs comment at this particular time, as summer is approaching, and the peculiar skin eruption resulting from contact with the insect has not yet become widely known in the United States. The results of the action of certain poisonous plants of the *Rhus* family are widely known both by the laity and the profession, but even physicians have not yet become acquainted with the irritant effects produced by these moths and their caterpillars.

The knowledge of skin rashes due to caterpillars dates back to the time of the ancients; in modern times the matter has been commented on mainly by the entomologists, who, in making their collections, have occasionally been poisoned. In recent years the attention given to nature study, even in the primary schools, has rendered the collection of caterpillars and moths by children common, and the bright colors of some of the poisonous varieties have added to the collector's zest. In places, too, as recently in the states named, the brown-tail moth, one of the poisonous species, has flourished exceedingly, and opportunities for poisoning have consequently increased. This will be better understood when it is explained that actual contact with the caterpillar or moth is not necessary, and that underclothes dried in the open in the neighborhood of infected trees may become the receptacles of the poison.

Clinically, the poisoning appears in two forms, as Tyzzer[1] has pointed out in his interesting study. If the poisoning results from direct contact, as when a caterpillar falls on the neck and is brushed off, a marked local dermatitis appears, confluent in character, and characterized by reddening and thickening of the skin with the formation of papules and vesicles. Children who handle caterpillars and then, as often happens, rub the eyes and face with the infected hands, develop more discrete lesions often associated with conjunctivitis. When underclothes become infected, too, the lesions are more discrete, and in the form of papules which change to vesicles.

That the hairs of the caterpillar, or to be more exact, the barbed or "nettling" hairs, are the poisoning agent has been known for some time. The transmission of the irritant by these hairs, even when dried and detached from the insect, explains the occurrence of the rash after wearing underclothes dried in the open, and the occasional occurrence of the dermatitis after merely walking in the neighborhood of thickly infested trees. The older writers were of the opinion that the irritant quality of the hairs was purely mechanical and due to their barbed shape, but the careful studies of Tyzzer have shown that this is an erroneous view. A definite toxic substance of an irritating character is contained within the nettling hairs; it can be destroyed by heat, is soluble in water at certain temperatures, and produces peculiar and characteristic changes in red blood corpuscles brought into contact with hairs which contain it. The intensity of the lesions produced by the introduction of the barbed hairs into the skin depends to a certain extent on the number of hairs introduced; the character of the lesion is always the same, consisting in a necrosis of the epidermal cells about the hairs, the formation of microscopic vesicles about the site of injury, and the production of inflammatory changes around the vessels of the corium. As in most toxic diseases there are marked individual variations in susceptibility, and in caterpillar dermatitis, just as in rhus poisoning, some are very susceptible, and others apparently immune.

1. Jour. of Med. Research, March, 1907, abstracted in this issue of The Journal, p. 1460.

JUDICIOUS LUNG GYMNASTICS

Some pertinent criticisms of the chest-swelling drill so dear to English army traditions have recently been expressed by Lieut. Col. F. A. Davy, M. D.,[1] who finds the "setting-up" drill, by which the military bearing is attained, to be wrong in theory and injurious in practice. This army surgeon asserts that rigid shoulders and protruding chests interfere with the normal course of the circulation. The exercises which bring about these results really invalid many men; they do not benefit the defective, but, on the contrary, often harm even the strongest. "Holding the breath" is condemned as disturbing the balance between the respiratory and circulatory systems and as being directly in contravention of physical laws. Dr. Davy declares that soldiers would be stronger and healthier if they were permitted to abandon the attitude they have worked so hard to attain, and to carry themselves much as the man on the street does. He finds that increased chest measure is often gained at the cost of motility and vital capacity; the young recruit much too often presents on examination a rapidly beating heart, a shortness of breath and a very decided discomfort.

It is common to find men who have been athletes during their college days to be suffering from hypertrophied and even chronically dilated hearts, with blowing murmurs especially pronounced at the carotids. These men pant easily and tire in a most distressing

1. Davy (F. A.): Army Medical Dept. Report for 1905, Lancet, Feb. 16, 1907.

way on slight exertion They are not nearly so "fit" as men who have lived normally, without attempting to "build muscle" by means of inordinately severe exercises Woods Hutchinson tells us that, according to statistics, athletes are two and one-half times as liable to cardiac diseases, 60 per cent more liable to kidney diseases, and 25 per cent more liable to die of the three main infectious diseases of adult life than the average man No doubt the same will be found true of those workingmen who most frequently subject their bodies to heavy and exhausting strain

For phthisical individuals lung gymnastics should certainly be interdicted in the presence of a decidedly subnormal temperature, or when there is fever (certainly when 100 degrees is reached), in cavity formation, in all acute processes, in evidently advanced disease, in tuberculous laryngitis, in rapid pulse and tumultuous heart, in fatigue or dyspnea on exertion, in hemoptysis or blood-streaked sputum, in pathologic blood conditions, in recent pleuritis, in other intercurrent or complicating diseases, when the weight is much below the normal for the patient's height, when strength and vitality are much reduced It must be always remembered that in phthisis the organism is on the verge of bankruptcy, and may easily collapse with immediately fatal issue when the imposed exercises are excessive or beyond its strength Of course, before prescribing "deep breathing, with the lips closed," the upper air passages should be examined for hypertrophies exostoses or other obstructions to respiration

THE DIAGNOSTIC DOSE OF TUBERCULIN

It is an unfortunate fact that the manner in which tuberculin first came into use led to a revulsion of feeling against it on the part of many physicians Once introduced, and if it had not been that Koch's hand was forced its introduction doubtless would have been delayed, it was hailed with acclamation and used without discrimination, with the natural result that its good features were overshadowed by the resulting catastrophes Notwithstanding the manner in which the majority of physicians have since held aloof from it many of the lung specialists have used it continuously for both diagnostic and therapeutic purposes Its value in diagnosis can be readily understood when it is stated that from 50 to 80 per cent of the patients who enter the German sanatoria for pulmonary tuberculosis have no tubercle bacilli in their sputum Many of them have very slight physical signs of tuberculosis and in many of these cases it is doubtful whether the signs represent an active process or are the result of healed tuberculosis or a pneumonokoniotic process The necessity of a correct diagnosis in these and other doubtful cases is especially great from the patient's standpoint for it may mean the difference between freedom and a long sojourn in an institution

One of the most serious errors which attended the administration of tuberculin in the early days after its introduction related to dosage There can be little doubt that too large amounts were given, with resulting severe local and general reactions and positive harm to the patient Wright's work on the opsonic index has exposed the fallacy, so far as the therapeutic use of tuberculin is concerned Whether or not we have been giving too large doses for diagnostic purposes is still under discussion At the Tuberculosis Congress in Paris in 1905 Lowenstein and Kauffmann claimed that the dosage used to-day was much too large, and that 2/10 milligram repeated three or four times at intervals of a few days was sufficient The old Koch method was to begin with one milligram and gradually increase to ten

The relative value of the different doses has been tested by Roepke[1] on over 700 patients He soon came to the conclusion that the dose advocated by Lowenstein was much too small, as it entirely failed to produce reactions in most of the patients with early lung signs on whom it was tested Roepke also concluded that the doses used in the old Koch method were unnecessarily large, and that it was not entirely the question of dose but also the matter of sudden increase in dose which decided the reaction He found 2/10 milligram was enough for an initial dose and recommends giving five times this dose in a few days, i e, one milligram, and a few days later, if no reaction has occurred, five times the second dose This gives results equally as good as the old Koch method and with only half the maximum dose The tuberculin reaction is unquestionably of great value in diagnosis, and it is to be hoped that the profession at large will recognize that the procedure is not dangerous if properly carried out

GRADUATE MEDICAL STUDY

The need of graduate technical instruction has been apparent for some years The introduction of new methods of diagnosis and treatment requiring the use of new instruments and apparatus has rendered the education of the physicians, as given at the medical schools of ten to twenty years ago entirely inadequate for the needs of the present day This need has been but imperfectly supplied by the graduate school and to meet it more perfectly there has been developed in Prussia and extended over the German Empire a system which is in striking contrast with those formerly in vogue In the first place it is designed to furnish what is essentially free instruction to all physicians A small registration fee is charged for some courses amounting only to two or three dollars Secondly, instead of concentrating the instruction in large cities it is aimed to carry it to the less populous centers where the physicians from the smaller towns and villages can attend without having to travel far The course usually is about two [illegible] long and the distance being small the doctor [illegible]

1 Ztschr f Tr[illegible]

home once during the course and could be called in case of emergency without great loss of time Thirdly, the courses are for the most part didactic and technical but not clinical The reason for this is that while the necessary apparatus for demonstrations and practical laboratory instruction can be found in the smaller places, or can be easily transported, and the specialist may go without inconvenience to the smaller town to deliver a lecture, clinical material can be obtained in sufficient abundance only in the large city The system is managed by a central committee located in Berlin and is brought to public notice by a special journal[1] which appears twice a month In addition a center for the direction of the movement has been provided in a building, known as the Kaiserin Friedrich House, devoted to the purposes of such technical instruction This central building serves as a central office for information and direction of the movement and as a storehouse for collections of specimens, etc, to be loaned gratis to the various local centers where courses are to be given It also provides laboratories for technical instruction, lecture rooms for didactic but not clinical lectures, and it contains, besides, a permanent exhibition of instruments and apparatus for the use of physicians where the visitor may see and examine the newest and best devices and determine what he needs The plan has been successful from the first so that about one-third of the physicians of the empire have taken part in the courses The subjects include in some cases a review of the entire medical curriculum, while in others special work is done in medical chemistry, bacteriology, electricity, Roentgenology, physical therapeutics, etc There appear to be many features of this scheme for post-graduate professional education that are applicable to American conditions The busy physician who can not get away to take a course in some large city is usually within easy reach of some college town where laboratory facilities could be provided and where he could go and return to his home at night Specialists who could expect to receive patronage from a group of village or country physicians would doubtless give demonstrations of methods of instrumentation with which the practitioner should be familiar County societies could easily arrange short courses with the help of a central organization which could take advantage of the resources of the universities whose aid in carrying out such a plan could confidently be relied on

HOSPITAL MANAGEMENT IN ST LOUIS

St Louis is presenting a gratifying spectacle of a united profession attacking one of the important medico-political problems, that of hospital management, and endeavoring to free the municipal hospitals from the interference and domination of practical politicians In 1905, according to the *St Louis Medical Review*, the eleven medical societies of St Louis, embracing all branches of medicine and all therapeutic creeds, formed a joint medical council for the purpose of effecting reforms in public medical matters The first subject chosen was hospital management, and the council found certain defects which it traces to the fact that under the present system all appointees, from the hospital superintendent down to the most humble employé, are subjects of political patronage The results, which are unsatisfactory under a good administration, become chaos when the administration is a bad one To remedy these conditions the council proposes 1, separation of the health department from the hospital department, 2, vesting of control over the hospitals in a board of trustees, similar to the present school board, and elected by the people, 3, provision for an executive superintendent or steward, 4, provision for a medical staff of experienced physicians appointed by the board of trustees for a term of years, 5, provision for an interne body of physicians, to be chosen on the basis of competitive examination conducted by the staff, such internes to be responsible to and under guidance of the medical staff These proposals have been modified in a bill to be presented to the municipal assembly providing for submission to the people of the necessary amendments to the city charter The council has received assurances of support from over a dozen of the most intelligent representative bodies of citizens, and apparently the only evidence of lack of unanimity in the good work is the attitude of the politically constituted health board This body, although it has formerly busied itself in legislative matters for the good of the public, suddenly discovered that "its functions are purely administrative, it had no jurisdiction whatever over matters of this kind, and that, under the circumstances, nothing could be gained by a further discussion of the subject" That hospitals should be taken out of politics needs no argument They are semi-educational institutions which have important functions in the way of clinical teaching and research work in addition to the care of the sick, and they need the peace and permanence of administration essential to the carrying out of definite policies It is to be hoped that the efforts of the St Louis physicians will be successful and will serve as an example and encouragement to other communities, showing what physicians can accomplish for the public welfare by united effort, and pointing to the ideals of management of medical institutions, toward which all ought to strive

THE PRESERVATION OF MOSQUITOES DURING WINTER

It has long been known that mosquitoes hibernate during winter, and are thus preserved from season to season In view of recent experiments conducted by Passed Assistant Surgeon Francis[1] of the Public Health and Marine-Hospital Service, it appears very probable that the *Stegomyia calopus* is also preserved in another way, thus in two ways being able to survive a southern winter Francis collected eggs of this genus of mosquito in Mobile, Ala, Aug 16, 1906, and preserved them in the dry state at practically outdoor temperatures until Feb 27, 1907, a period of six and one-half months Water was then added, and the eggs developed into adult mosquitoes, these in turn laid eggs which hatched into larvæ, thus completing the life cycle The length of

1 Ztschr f aerztl Fortbildung

1 Public Health Reports xxii No 14

time stegomyia eggs can withstand desiccation has been variously stated Theobald mentions two months[2] Reed and Carroll[3] kept them for ninety days without destroying their fertility The latter observers also noted that freezing did not destroy their viability Observations regarding the habits of this mosquito are of much importance, since it is responsible for the transmission of yellow fever, and Francis' studies are of value to sanitarians, as they readily account for the propagation of this species in our southern latitudes Francis also reports having found this species during every month of the year—an important point which indicates the necessity of continued efforts looking to their destruction In view of our present knowledge it is fortunate that the statements of Marchoux and Simond[4] regarding the hereditary transmission of the virus of yellow fever have yielded only negative results in the hands of other workers

DEATH OF THE EDITOR OF THE LANCET

We are called on this week to chronicle the death of Thomas H Wakley, F R C S, Eng, senior editor of the London *Lancet* His death removes from the journalistic field one of its great men, one who has helped to build up a great paper, and one whose personality had its influence on every department of the business under his direction The *Lancet's* work in the analysis of foods and medicines has been a most valuable contribution to progress We can speak no better eulogy of Mr Wakley than to quote from the "In Memoriam" of the *Lancet,* April 13 "He was bold in exposing evils of a general or public character, hearty in helping forward every public advancement, zealous to make the *Lancet* the first chronicler of any new and promising progress in the science and art of medicine, and especially anxious to make it useful in works which were of a sound philanthropical and beneficent nature"

PURE MILK OR BLENDED WHISKY

As we go to press we learn that the substitute pure food bill now pending before the Illinois Legislature has been advanced to third reading in the House This bill is a makeshift substitute for a carefully drawn and thoughtfully considered bill formulated by the state Pure Food Commission The original bill contained practically the same provisions as the national Food and Drugs Act, modified for state purposes It also contained special provisions for a pure milk supply and regulated conditions in the dairy farms as well as methods of transportation and delivery The substitute bill contains none of these provisions It is stated in the daily press that the chairman of the committee on manufactures induced the speaker of the House to omit these provisions on the ground that they would interfere with the butter milk and cheese business It has also been stated that the Elgin Board of Trade, which practically controls the butter market, was influential in bringing about this change The position of the business men seems to be that cleanliness is expensive and will lay too heavy a tax on the business and that the people of the state in order to protect the profits of the business should take the consequences in the shape of dirty milk The *Chicago Daily News* charges that a lobbyist, who is also interested in blended whisky, played an important part in the substitution of the emasculated bill for the original It might be well for the medical profession in Illinois to ascertain whether the pure food bill now pending is for the benefit of the people or was drawn in the interests of dirty milk and blended whisky

2. Monograph of the Culicidæ 1903 iii p 6
3. Medical Record lx p 647
4. Ann de l Institut Pasteur xx p 16

Medical News

ILLINOIS

Epidemic Diseases—Three new cases of scarlet fever were discovered in Rockford, April 15 all on the West Side The center of infection from which the cases originated has not yet been discovered——An epidemic of measles is reported at the Soldiers Orphans' Home, Bloomington, where 45 cases and 4 deaths have occurred

Personal—Dr David C Kretzer after three years duty with the Philippine constabulary has resigned and returned to his home in Decatur——Dr Frank H Gardner has been elected president Dr Henry S Bennett, vice president and Thomas J Lamping secretary treasurer, of the Moline City Hospital——Dr John W Dryer, Aurora while bicycling was thrown to the pavement by a runaway horse and suffered severe cuts and contusions of the face and body——Dr Charles C Rayburn, Kewanee, has decided to go to the West for the benefit of his health——Dr John J Rigg, Mount Pulaski, will leave in a short time for Europe

Chicago

Personal—Dr Frank Billings and daughter returned from Europe April 18——Dr L Harrison Mettler has resigned from the faculty of the Chicago Clinical School

City Physician Reports—Dr Joseph F Todd, city physician, has submitted a report of the work of his department for the fiscal year There were 2 705 visits and inspections made, 87 of which were for alcoholism Aid was rendered to 104 injured persons

Visiting Nurses—The annual report of the secretary of the Visiting Nurses' Association of Chicago shows that the year has been successful A number of bequests have been received and the association aided in the establishment of the Edwards Tuberculosis Fresh Air Sanatorium at Naperville The question of a central home for the nurses is now being considered

Iroquois Memorial Hospital Plans—The committee of the Iroquois Memorial Hospital Association has outlined to the president of the Cook County board the plan of the association for a memorial emergency hospital in the downtown district The committee proposes to lease the ground at 43 and 45 La Salle Street at an annual rental of $5 000 and to erect thereon a three story building to cost about $30 000 The committee asks the county to pay for the lease of the land and states that the hospital association will pay for the building

Reduced Death Rate—During the week ended April 20 100 fewer deaths were reported than during the preceding week The deaths for the week numbered 617 equivalent to an annual death rate of 15 26 per 1 000 Pneumonia still headed the death list with 103 followed by consumption with 81 heart diseases with 60 Bright's disease with 47 acute intestinal diseases with 42 violence (including suicide) with 28 and cancer with 27 Of the communicable diseases diphtheria caused 12 deaths scarlet fever and whooping cough each 11 measles 7 typhoid fever 4 and influenza 3

INDIANA

Gives Hospital Site—Dr George W Pence Greencastle has offered to the Putnam County Hospital Association a building site for a hospital on the condition that the hospital shall bear his name that it shall be used for hospital purposes only that it shall be used only by regular practitioners and that the association shall raise a fund sufficient for its erection and maintenance

Personal—Dr Nelson D Prayton Indianapolis one of the physicians in the employ of the Isthmian Canal Commission has returned to his duty in Panama after a vacation in Ecuador and the Columbian republic——Dr Lyman T Lawles, Huntertown was shot and seriously injured in the doorway of his home by a man believed to be insane——Dr T Henry

Davis, Richmond, has resigned as a member of the State Board of Health, to take effect May 1

March Mortality and Morbidity—The deaths for March amounted to 3,502, or 272 more than were reported in March, 1906. During the month measles was prevalent in 82 of the 92 counties of the state, and 15 deaths were reported. Influenza was still more prevalent, 204 deaths being reported, while only 46 deaths were reported in the corresponding week of 1906. The order of prevalence of diseases was as follows: Influenza, tonsillitis, rheumatism, measles, pneumonia, bronchitis, diphtheria, scarlet fever, pleuritis, intermittent and remittent fever, typhoid fever, diarrhea, smallpox, whooping cough, inflammation of the bowels, erysipelas, dysentery, typho malarial fever, cerebrospinal meningitis, puerperal fever, cholera morbus and cholera infantum. The deaths from pneumonia numbered 575, or 106 more than for the corresponding month of last year. There was an increase also of 6 deaths from cancer and 54 from violence. Tuberculosis caused 431 deaths. Smallpox was reported from 20 counties with no deaths, in the corresponding month of last year 97 cases were reported from 11 counties, with no deaths. There were 210 cases of typhoid fever reported, with 40 deaths, from 33 counties, in the corresponding month of last year there were 211 cases, with 34 deaths, from 62 counties.

KANSAS

Addition to Medical College—An addition is proposed to the medical building of Kansas University at Rosedale, to cost $45,000.

State Society Meeting—The annual meeting of the Kansas Medical Society will be held on the third floor of the Banking Trust building, Seventh Street and Minnesota Avenue, Kansas City, Kan., March 7 to 9.

Personal.—Dr. John C. Rudolph, Lawrence, has been appointed health officer of Douglas County, vice Dr. Hiram T. Jones, resigned.——The following health officers of Salina County have been appointed: Drs. Howard N. Moses, Salina, Louis O. Nordstrom, Assaria, Enos R. Cheney, Gypsum, and Wilber E. Fowler, Brookville.——Dr. Josiah P. Lewis, Topeka, is seriously ill at his home.

College Graduation.—The class of 1907, numbering 15, was graduated April 11 from the Kansas Medical College. Dr. H. B. Ward, Lincoln, Neb., dean of the College of Medicine of the University of Nebraska, delivered the general address, and Theodore W. Peers the faculty address. Dr. William L. Lindsay, dean of the college, was master of ceremonies, and the diplomas were presented by the president of the institution.

KENTUCKY

Epidemic of Meningitis—It is reported that 20 more deaths from cerebrospinal meningitis have occurred in Harlan County during the last month.

Library Donated.—Dr. Joseph M. Mathews, Louisville, has donated his personal medical library, consisting of 800 volumes, to the local public library.

Personal.—It is announced that the resignation of Dr. James W. Hill, superintendent of the Institution for the Education of Feeble Minded Children, Frankfort, has been received and accepted by the state board of control. Dr. Louis H. Mulligan, assistant superintendent of the Eastern Kentucky Asylum for the Insane, has been called to Frankfort by the state board of control to take charge of the institution until a superintendent can be elected.——Dr. David T. Stuart, Paducah, has arrived in Shanghai.——Dr. William A. Keller, Louisville, city physician for the West End, is reported to be critically ill at his home with typhoid fever.

LOUISIANA.

War on Mosquitoes—The New Orleans city board of health has begun an investigation of mosquitoes not the *Stegomyia calopus* but the ordinary mosquitoes which are a source of discomfort during the entire year, and their extermination has been systematically planned.

Medical Department of State University—At a meeting of the executive committee of the board of supervisors of the Louisiana State University it was announced that progress had been made and that the medical department would be inaugurated in New Orleans this fall under most favorable circumstances.

Havoc Wrought by Cyclone—The cyclone which swept over the Gulf states April 6 wrecked several buildings of the Louisiana Insane Asylum, Jackson. The damage to the institution was about $100,000 and four female patients were killed. The governor of the state immediately sent tents and cots for the temporary housing of the inmates of the asylum, and measures have been taken for rebuilding.

Personal.—The office of Dr. Mark L. Johnson, Hackley, was burned to the ground, with a loss of $1,100 and no insurance.——Dr. James M. Batchelor, house surgeon at Charity Hospital, and Dr. Waldemar T. Richards, New Orleans, were severely injured in an automobile accident, March 30.——Drs. C. Milo Brady, New Orleans, medical inspector for the State Board of Health, and Henry A. Veazie, shipping inspector for New Orleans, have concluded their service for the state. Dr. Brady will enter on private practice and Dr. Veazie has been appointed to the U. S. P. H. and M. H. Service.

Sanitary Conference.—A conference of the parish and municipal health officers has been called for May 2, 3 and 4 at Opelousas, under the auspices of the Louisiana State Board of Health, to consider important questions of public health and hygiene. One of the most important matters to come before the conference is the outlining of a bill to be presented before the next legislature, giving parish health officers reasonable authority and fair compensation. In addition to health officers the commercial bodies of the state and women's clubs have been invited to send delegates to the conference.

MAINE

Grenfell in Portland.—Dr. Wilfred Grenfell spoke on his mission to the deep sea fishermen of Labrador, at St. Luke's Cathedral, Portland, April 14.

Personal.—Dr. G. Gilmore Weld was inaugurated as mayor of Old Town, March 25.——Dr. Walter L. Hunt, Bangor, has succeeded to the practice of Dr. Frederick W. Mitchell, Island Falls. Dr. Mitchell, after pursuing postgraduate work in Baltimore, will locate in Houlton.

Contagious Diseases—It is reported that diphtheria is prevalent in the Capsuptic and Rangeley Lake regions. Many lumber camps are in quarantine. The Franklin County Board of Health is cooperating with the State Board of Health to check the spread of the disease.——At Westbrook 25 cases of scarlet fever have been reported to the board of health, and on this account the public schools have been closed.

MASSACHUSETTS

Feeble-Minded Institution Site Bought—Valuable properties in the town of Wrenham have been purchased by the state for the establishment of an institution for the feeble minded. About 500 acres have been secured.

Bill to Lower Milk Standard Defeated—A bill introduced into the senate to lower the standard of the milk supply in the state was defeated. Dr. Charles Harrington, Boston, secretary of the State Board of Health, opposed the bill.

Personal.—Dr. Henry William Miller, Taunton, has been made psychopathologist in the Cook County Institutions, Dunning, Ill.——Dr. S. Alphonse Daudelin, who sailed for Europe on *La Savoie*, April 18, was given a dinner at Worcester, April 16, in honor of his appointment as high commissioner to the Maratime Exposition, Bordeaux, France.

Management Approved—The investigation of the State Hospital for Dipsomaniacs, Foxboro, has resulted in a report by the governor's executive council, approving the management. It is advised, however, that an age limit should be established and that there should be a separate institution for the care of hopeless inebriates without criminal records. With these two changes, the present institution will be much more efficient in accomplishing the purposes for which it was established.

MINNESOTA.

Few County Health Boards—Dr. Henry M. Bracken, secretary of the State Board of Health, states that only 30 out of the 85 counties in Minnesota have appointed county boards of health, as required by law.

Proposed Fund for Sanatorium.—A request is to be made to the legislature at this session for the creation of a fund of $50,000 to be used for the maintenance of the State Sanatorium for Consumptives near Walker. One wing of the main building is nearly completed and about 25 acres of land, on which cottages may be constructed, have been cleared. The building already erected is almost ready for occupancy at a cost of more than $80,000.

Personal.—Dr. and Mrs. Charles P. Robbins, Winona, have returned after eight months abroad.——Dr. O. Edward Linjer has been elected city physician of Minneapolis, vice Dr. Emil H. Beckman, resigned.——Dr. Charles Malchow, Minneapolis, imprisoned on a charge of sending improper literature through the mails, was released from the state penitentiary, March 30.——Dr. John B. Dunn has been elected chairman of the

board of health of St Cloud——Dr Thomas H. Wimer, Marshall, is reported to be critically ill——Dr Adolph O Bjelland has been appointed health officer of Mankato

MISSOURI.

Brown Gets Loving-Cup—On April 11 the staff of the St Louis City Hospital presented a silver loving cup to Dr John Young Brown, who recently resigned from the superintendency

Hydrophobia Ward Opened.—The hydrophobia ward of the St Louis City Hospital was opened April 12 St Louis is now thoroughly equipped for treating patients afflicted with rabies

Smallpox—Five cases of smallpox have occurred at the Young Women's Christian Association boarding house, Kansas City——The health officer of Greene County reports 25 cases of smallpox at Republic

Senior Student Dies.—Joseph H. Magana, a native of Mexico and a senior student at the St Louis College of Physicians and Surgeons, died at Jefferson Hospital in that city, April 4, after an operation for appendicitis

Tuberculosis Prevention.—The St Louis Society for the Prevention of Tuberculosis has been incorporated with the aim of disseminating, by means of lectures and literature, information concerning tuberculosis, how it spreads and how it may be combated. The association expects to formulate plans for a tent sanitarium for the treatment of tuberculosis

Physician Fined.—Dr F W Lanoix, Kansas City, was fined $25 April 14, on the charge of practicing medicine without a license A complaint was made that he had entered into the practice of medicine and surgery in the city without having filed a copy of his certificate with the State Board of Health, and that he was not authorized by the board to practice medicine and surgery

Personal.—Dr Emmett P North has been appointed to succeed the late Dr Augustus Von Liew Brokaw as superintendent of the United Street Railways Company, St Louis——Dr Edmund A Donelan, St Joseph, for several years president of the board of education, has been re-elected medical supervisor of public schools by the board——Dr John F Chandler, Forest City, has been elected secretary of the Holt County Medical Society, vice Dr Samuel W Aiken, Oregon, removed from the county

MONTANA.

State Board Election.—The newly formed State Board of Health met in Helena, perfected its organization and elected Dr William Treacy, Helena, president, and Dr Thomas D Tuttle, Billings, secretary

Personal—Dr William T Scott, Great Falls, has resigned as secretary of the Cascade Medical Society, and has gone to Europe——Dr Robert L Stokes, Lewiston, has moved to Washington, D C——Dr Thomas H Pleasants, Lewiston, formerly of Helena, is reported to be dangerously ill with pneumonia in Chicago

Elections.—The Silver Bow County Medical Society, at its annual meeting held in Butte, elected the following officers President, Dr Josiah S Hammond, vice president, Dr Creswell T Pigot, secretary, Dr Grace W Cahoon, treasurer, Dr McCormick Smetters, and executive committee Drs Josiah S Hammond Laura L Keisker, Richard C Monahan and Thos J Murray, all of Butte——The Madison County Medical Society, at its annual meeting, held in Virginia City April 5, elected Dr Cay F Tidyman, Ennis, president, Dr Elmer L Sutherland, Sheridan, vice president, Dr Edgar I Bradley Virginia City, secretary treasurer, and Drs Tidyman and Bradley delegates to the State Medical Association.

NEBRASKA.

Bill for Tuberculosis Hospital Passed—A bill introduced by Representative Howard providing for the establishment of a tuberculosis hospital at Hastings and appropriating $25 000 to pay for the site and construction, has passed the House of Representatives

Personal.—Dr Joseph W Bourne South Auburn has been appointed physician for the west half of Nehama County including Auburn and Dr W W Frazier Nehama physician for the east half of the county including the poor farm——Dr Allen T Hill Lyons while making a professional call was attacked by highwaymen and lost $15 and a hypodermic syringe

Official Organ of State Society—The *Western Medical Review* recently transferred from Lincoln to Omaha has been made the official organ of the state medical society At a meeting April 11 the following directors were elected Drs August F Jonas, Frank E. Coulter, Henry L. Akin, Henry L. Burrell, and George H Bicknell On the following day the board of directors met and elected Dr August F Jones, president, Dr Henry L. Akin, secretary, and Dr Archibald L. Muirhead, editor

NEVADA.

Personal.—Dr John A Ascher Sparks has been appointed physician of Washoe County——Dr William L Berry, Carson City, has been re elected physician of the Nevada state prison

Hospital Notes.—The local Catholic parish of Reno will undertake the construction of a hospital, to be placed in charge of the Dominican Sisters, and to cost $70,000——The Miners' Union Wonder, has started a movement toward the erection of a hospital in the camp

NEW HAMPSHIRE

Loss by Fire—A recent fire at Newport destroyed the house of Dr J Leavitt Cain, with a loss of more than $4 000

Epidemic of Influenza—The physicians of Nashua report that there are at least 200 cases of influenza, affecting especially the eyes, in Nashua and vicinity

New Hospital Building—Laconia is to have a new hospital the erection of which will be begun in a short time The structure will be of brick with stone trimmings The administration building will be the first to be erected

College Graduation.—At the annual graduation of Dartmouth Medical School Hanover, March 29, a class of 11 received diplomas Dr William H Leith, Lancaster delivered the address to the graduates and diplomas were presented by Dr William T Smith, Hanover, dean of the medical school

NEW YORK.

New District Society Organized—The Fifth District Branch of the State Medical Society has just been organized, including the counties of Oswego Onondaga, Lewis, Oneida, Herkimer and Jefferson The first meeting will be held in October

Academy Anniversary—The fifty fifth anniversary of the Elmira Academy of Medicine was celebrated by a dinner at the Elmira City Club, April 4 Dr Charles H Frazier, dean of the Medical Department of the University of Pennsylvania read a paper on "Surgical Complications in Typhoid which Affect the Abdominal Viscera"

Personal—Dr Charles W Pilgrim Poughkeepsie, has decided to retain the position of president of the State Board of Lunacy Commissioners——Dr Henry W Carpenter, for 55 years a practitioner of Oneida, suffered a cerebral hemorrhage recently——Dr Edward H Hutton, Corning, is seriously ill at the Corning Hospital with pneumonia

Deaths from Respiratory Diseases.—This class of diseases was mainly responsible for an increase in the February death rate The death rate was 18 8 per 1,000 for the month of February, compared with 18 for the same month last year In the entire state there was a decrease of 228 deaths from pneumonia as compared with February, 1906 but an increase of 974 from other acute respiratory diseases In New York City there were 463 fewer deaths from pneumonia, but an increase of 668 from other acute respiratory diseases The mortality from influenza was also high, 618 deaths being recorded from this cause There was also a slight increase in the number of deaths from these diseases during February as compared with January Deaths from external causes increased from 518 in February, 1906 to 715 in February, 1907

Matters Before the Legislature—Representatives of humane societies have made a strong appeal for a favorable report on the Francis bill which restricts vivisection to such experiments as shall be performed under the supervision of the state A delegation of New York surgeons appeared in opposition to the bill They argued that the bill might bring about experimentation on human beings and check the advance of science Such a bill would close the laboratories in the medical colleges and discourage surgery——After a debate characterized by considerable bitterness the senate on April 18 advanced to the order of final passage the public health committee's bill substituting a single medical examining board for the three boards now representing the allopathic homeopathic and eclectic schools of medicine Dr D B St John Roosa says in regard to the passage of this bill through the senate that a ridiculous climax in medical legislation is evidently near The following paragraphs have crept into the bill somewhere along its course

Where the application be for a license to practice osteopathy the applicant shall produce evidence that he has studied osteopathy not less than three years including three entire terms or sessions not less than nine months in three different calendar years in a college of osteopathy maintaining at the time a standard satisfac

tory to the regents After 1910 the applicant for a license to practice under this act shall produce evidence that he has studied not less than four years, including four satisfactory courses of not less than seven months each in four different calendar years, in a college maintaining at the time a standard satisfactory to the regents

It is further provided that any person who shall be actively engaged in the practice of osteopathy in the State of New York on the date of the passage of this act and who is a graduate in good standing of a school or college of osteopathy within the United States which at the time of his or her graduation required a course of study of two years or longer including the subjects of anatomy physiology pathology hygiene chemistry, obstetrics diagnosis and the theory and practice of osteopathy with actual attendance of not less than twenty months, which facts shall be shown by his or her diploma and affidavit shall on application and payment of $10 00 be granted without examination a license to practice osteopathy provided application for such license be made within six months after the passage of this act. A license to practice osteopathy shall not permit the holder thereof to administer drugs or perform surgery with a knife. Licenses to practice osteopathy shall be recorded in accordance with the provisions of this act and the word osteopath shall be included in such registration and such license shall entitle the holder thereof to the use of the degree D O or doctor of osteopathy

The New York milk committee and the committee on the prevention of tuberculosis of the charity organization have decided to cooperate in seeking to get a law passed this session to stamp out tuberculosis in the cattle of the state It is thought that with not less than $200,000 to be spent by the state department of agriculture in testing and condemning cattle, a long step would be taken in securing milk free from tuberculosis germs A bill to increase the compensation to be paid to farmers for condemned cattle has led the committee to believe that some law can be passed providing for a strict quarantine on all cattle coming into the state and that all cattle shall be tuberculin tested The proposed bill, in addition to this, would forbid the sale of all milk handled by a person having an infectious disease and would make it illegal for any one who has been exposed to such disease to be employed in a dairy farm until such person had received a clean bill of health from the local health authorities

New York City

Personal—Dr Charles H Peck, the senior attending surgeon to the French Hospital of this city, has recently received from the French government through the minister of public instruction and fine arts the decoration of "Officier de l'Instruction Publique"

Object to Tuberculosis Hospital—The taxpayers of Richmond, Staten Island, have asked for a permanent instead of the temporary injunction obtained last December, restraining the charities commissioner from building a tuberculosis sanitarium on Staten Island

Contagious Diseases—There were reported to the sanitary bureau for the week ended April 13, 469 cases of measles, with 3 deaths, 466 cases of tuberculosis, with 200 deaths, 438 cases of scarlet fever, with 14 deaths, 341 cases of diphtheria, with 39 deaths 80 cases of typhoid fever, with 8 deaths, 55 cases of whooping cough with 7 deaths, 17 cases of cerebrospinal meningitis, with 15 deaths, 69 cases of varicella and one case of smallpox, a total of 1,936 cases and 289 deaths

Contagious Diseases and the Bellevue Staff—The records of Bellevue Hospital for the past three months show that six members of the house staff have been stricken with diphtheria, three with scarlet fever and one with blood poisoning, which may result in the loss of a finger During the same time 13 nurses have been stricken with diphtheria or scarlet fever while on duty This would indicate that the hospital interne in New York takes more risk of death than a fireman, and more chances in one day than a policeman takes in a year

Hospital Conference—The annual hospital conference of the City of New York was held April 24 at the Academy of Medicine Dr S S Goldwater gave an address on "Dispensary Ideals with the Plan for a Dispensary Reform Through the Adoption of Restricted Numbers" The address dealt with the literature of dispensary abuse the New York dispensary law the newer dispensary ideals the work of dispensary nursing association, the district work of New York dispensaries the opinions of prominent dispensary workers and the author's own proposed program

City Has Low Death Rate—The lowest death rate for the year was reported for the week ended April 13 It was 18 47 per 1 000 or 1 517 deaths as compared with 20.35 per 1,000 or 1 620 deaths for the corresponding week of last year The highest number of deaths thus far this year was for the week ended January 5 when there were 1 721 deaths The number of deaths from typhoid fever for last week was 8 as compared with 10 in the corresponding week of last year The number of cases reported last week was 81, which is encouraging as compared with the 120 cases reported two weeks previously

Anniversary of German Dispensary—On the occasion of the fiftieth anniversary of the German Dispensary, Dr Charles H Jaeger founded three prizes, to be known as the Marie Jaeger Memorial Prizes The prizes are for medical essays and are of $100, $75 and $50, respectively The competition is to be open to members and collaborators of the German Dispensary and to members of the house staff of the hospital The prizes are to be awarded December 31 of each year The essays are to be based on cases occurring in the service of the hospital and dispensary The object is to stimulate research and promote scientific study

Watershed Dangers—The department of health has given out the report of a conference at which Dr Darlington, health commissioner, John H. O'Brien, the water commissioner, and Dr Eugene H Porter, state health commissioner, were present to consider conditions existing at Mount Kisco and Katonah, on the Croton watershed, which have been threatening the pollution of the water supply of this city The report says that the State Department of Health has been endeavoring to have a sewer system constructed at Mount Kisco The village authorities maintained under the law that New York City should pay for the sewer system and sewer disposal The corporation counsel of New York City has advised that this city is not liable The matter has been placed in the hands of the attorney general, who will shortly render an opinion Commissioner Porter has written Dr Darlington urging the construction of a filtration plant as being the safe way in which the water supply can be protected. Experiments in infiltration are being made, as it is estimated that a plant will cost the city $10,000,000, which is more than well can be afforded unless it is assured that the plan adopted will be entirely satisfactory

OHIO

Joint Commencement—On May 8 the sixtieth anniversary of Starling Medical College will be celebrated At this time the joint commencement of the newly combined Starling Medical College and Ohio State University will be held Seventy two applicants for degrees will be presented

Lectures on Nervous and Mental Diseases—Dr Frank W Harmon, superintendent of Longview Hospital for the Insane Carthage, has instituted a course of lectures from the immense mass of material on nervous and mental diseases collected in the institutions These lectures, delivered on Mondays from 4 to 5 p m, are by Dr Philip Zenner, Frank W Langdon, Herman H Hoppe and David I Wolfstein The lectures are free and are intended for practitioners and senior students

In the Hands of the Law—"Dr" T P Hanley, Kinsman arrested for practicing medicine without a license was found guilty and fined $200 and costs——Dr James G Ambrose, Dayton, charged with performing a criminal operation, is reported to have been found guilty and released on bail, pending the disposition of a motion for a new trial——"Dr" C R Greiner of Toledo, charged with practicing medicine without a license, is said to have been found guilty He has taken an appeal

Personal—Dr A W Foertmeyer has been appointed resident physician to the Cincinnati City Hospital——Dr Samuel S Wilson Xenia, has returned from Europe——Dr J Thomas Elliott, East Liverpool goes to Johns Hopkins University for two years postgraduate work, June 1——Dr Oliver H Pinney Norwood, will leave for Assonat, Central Africa about the 1st of June——Dr Adam B Howard, formerly superintendent of the Cleveland City Hospital, will leave April 29 for a trip to Great Britain——Dr Frank McCafferty Columbus has been appointed a member of the local board of public safety——Dr Harry E. Welch, health officer of Youngstown, is seriously ill with septicemia

PENNSYLVANIA.

Decrease of Typhoid—Superintendent Edwards of the Pittsburg Bureau of Health, reports that during March 144 cases of typhoid were reported while during March, 1906, more than 400 cases occurred

Bills Passed—On April 17 the senate passed the bill legalizing the practice of osteopathy in the state, providing for a State Board of Osteopathic Examiners and allowing them a member in the State Medical Council On the same day the Senate Appropriations Committee reported favorably the bill appropriating $20 000 to the York Hospital

Expenditure for State Hospital—At a special meeting of the Board of Trustees of the State Hospital for the Insane, Norristown, held April 19, it was decided to expend the

$412,000 appropriated by the legislature as follows Home for men nurses, $75,000, convalescent home for men, $60,000, chapel and amusement, $50,000, bard extension and storage house, $15,000, two ward buildings, $200,000, and enlargement of refectories, $30,000

Personal—Dr Martha S Everitt has removed from Scranton to York——Dr Jonathan L. Forwood, Chester, completed his first half century of practice of medicine and was the guest of honor at a banquet at the Keystone Club in that city April 8——Dr Milton A Hengst has been elected president and treasurer of the Birdsboro Board of Health——Dr John W Beck, Peckville, who has been seriously ill with peritonitis, is reported to be convalescent——Dr B H Warren state dairy and food commissioner, has resigned——Dr William T English, Pittsburg, has returned from an extended tour in the South——Dr Joseph K. Weaver, Norristown, surgeon general of Pennsylvania, was recently presented with a loving cup by the officers and teachers of the Baptist Sunday School, of which he has been superintendent for 25 years——Dr Charles W McConnell, Altoona, is seriously ill as the result of a shock from a heavy current of electricity, April 6——Dr Henry H Riegel, Catasauqua, will finish half a century of practice of medicine early next month——Dr Frederick H Evans, Chester, has been elected advisory physician of the Eddystone Board of Health——Dr Samuel G Dixon, State Health Commissioner, Harrisburg, has been elected honorary member of the Academy of Physics and Chemistry, Palermo, Italy, and has been awarded a medal of the first class for scientific and humanitarian merit

Philadelphia

School of Anatomy Competition—On April 15, Dr W Wallace Fritz announced the result of the competitive examination of the Philadelphia School of Anatomy The best thesis was presented by Dr James F Kelly of Bridgeport, Conn, who received as a prize a case of surgical instruments

Reception to Gilder—A reception was given by the Medical Club of Philadelphia April 19, to Richard Watson Gilder, who made a short address, in which he urged the establishment of an institute for the investigation of faith cure and other treatments not recognized by the medical profession

Presentation to Resident Physician.—The physicians and nurses of the University Hospital gave an informal dinner to Dr George Morris Piersoll, chief resident of the hospital, April 19 On April 20 he completed his two years' service and a silver loving cup was given him as a testimonial

Donation of Land to Hospital—Mr Felix Isman has donated to the Jewish Hospital Association a triangular piece of ground at the corner of Tenth Street and Clarkson Avenue adjoining the property owned by the hospital This conveyance enables the Hospital Association to square the lines of the property which it owns

Personal—Dr Frank H Getchell, prominent in medical circles for many years, is reported to be critically ill as the result of a fall on ice coated steps five weeks ago——Dr J William White has been selected by the directors of the Pennsylvania System as advisory surgeon for the company He will have the general supervision of the medical department of the system and its hospitals and equipment will be organized in accordance with his views——Dr John H Gibbon has been elected associate professor of surgery in Jefferson Medical College, vice Dr John Hill Brinton, deceased.

Society to Support Dispensary—At a meeting held April 16 a new society was formed whose object is to solicit funds for the support of the Southeastern Dispensary of the University of Pennsylvania Dr Barton Cooke Hirst who as professor of obstetrics is by arrangement, honorary president of the society and the active chairman of the board of directors presided An appeal is made to the Alumni and friends of the university to support this project aside from further increasing the efficiency of the obstetrical department and the benefit to medical students The inhabitants of the southeastern section of the city are most deserving poor, and the dispensary has been of great service to them

Cerebrospinal Meningitis.—On April 14 Dr Jay F Schamberg addressed the medical inspectors of the Bureau of Health on measures to be taken to detect cases of spinal meningitis and to prevent the spread of the disease Dr Schamberg declared there is no need for public alarm over the number of cases of spinal meningitis He regards it as unlikely that the present ratio of cases will keep up In the week ended April 20 there were 36 new cases of cerebrospinal meningitis reported to the Bureau of Health This is an increase of 8 over the number reported for the previous week Director Clay of the Department of Public Safety has issued orders to flush the streets in the districts where the disease exists

Semi Centennial of Society—The Pathological Society of Philadelphia, one of the oldest, if not the oldest of its kind in America, will celebrate its semi centennial May 10 and 11 On the first day addresses will be delivered by Dr Frederick G Novy, Ann Arbor, on "The Rôle of Protozoa in Pathology," by Dr Simon Flexner, Rockefeller Institute New York, on "The Newer Pathology," and by Dr Alonzo E. Taylor of the University of California, San Francisco, on "The Dynamic Point of View in Pathology" In the afternoon a commemorative meeting will be held in the Pennsylvania Hospital where the first meeting of the society took place in 1857 At this session Dr William Osler Regius Professor of Medicine in Oxford University, will deliver an address on "Pathology and Practice" A dinner will be given in the evening and the next day will be devoted to an exhibition meeting of interest to pathologists, clinicians and surgeons

GENERAL

Carroll Made Doctor of Laws—The Board of Regents of the University of Nebraska has recommended that the degree of Doctor of Laws be conferred on Major James Carroll surgeon, U S Army at the annual commencement exercises in June

Data on Diet and Endurance Wanted—Prof Irving Fisher of Yale University desires us to announce that he is engaged in collecting all available statistics and facts bearing on the question of diet in relation to endurance Physicians who have had experience with more than one system of diet whether personally or through patients are invited to address him at 460 Prospect Street, New Haven, Conn He will then submit definite questions

Railway Surgeons Meet.—At the annual meeting of the physicians of the Cotton Belt Railway System, held in Texarkana, Texas April 8, the following officers were elected President Dr C M Ludlow, Hillsboro, Texas, vice presidents Drs William H Blythe, Mount Pleasant Texas, Amos W Troupe, Pine Bluff, Ark, J W Beall, Malden Mo, and Oscar Dowling, Shreveport, La and secretary treasurer, Dr H H Smiley, Texarkana, Texas

Control of Typhoid Fever in the Army—Medical officers of the Army have become more and more impressed each year with the importance of contact infection as a means of spread of typhoid fever among troops This fact was clearly shown in the report of the typhoid fever board of 1898 Of 1 608 cases which they were able to definitely locate in particular tents, 62 80 per cent were connectable directly or indirectly Of recent years the attention of medical officers has been frequently called to the importance of the patient as the source of infection and recently they have been instructed that for practical purposes the disease must be considered contagious and patients affected with it isolated as far as practicable in separate wards This point together with early recognition and careful attention to detail in the disinfection of all discharges as they leave the patient are emphasized in the directions for the control of the disease

Education Conference—The third annual conference of the Council on Medical Education of the American Medical Association will be held in the Auditorium Hotel Chicago Monday April 29, 1907 Committees will report on the advisability of allowing a year's advanced standing in the medical school to graduates of colleges of arts and sciences and also on details as to the requirement, in addition to a four year high school education, of a year to be devoted to physics chemistry biology and one language as a prerequisite to the study of medicine The following papers are also announced

Conditions Controlling General and Medical Education in the South Chancellor J H Kirkland of Vanderbilt University Nashville Tenn

Inspection of Preliminary Credentials by an Officer of the State Examining Board Dr Dudley Fait President California State Examining Board San Francisco

What Constitutes a Equitable Medical College? Dr Howard J Rogers First Assistant Commissioner of Education Albany N Y

Methods of Conducting the State Board Examinations Dr Burt G D Harlson Secretary Michigan State Board of Registration Detroit

A Plea for a Licensure Examination in Two Parts Dr W T Mayo Chairman Judicial Council Association of American Medical Colleges

National Health Department—Steps have been taken by the Committee of One Hundred appointed last June by the American Association for the Advancement of Science toward stirring up the public sentiment in favor of federal supervision of the public health [illegible] new department or through a [illegible] already existing Twenty members [illegible] meeting and an executive com[illegible]

be vested with the prosecution of the movement Other meetings will soon be held and local committees to cooperate with the central committee will be named. If this scheme is successful it will include bureaus on infant hygiene, school sanitation, pure food, registration of physicians, drugs, drug gists and drug manufacturers, and on public and private institutions of correction, detention and residence There would also be a bureau of national sewage and one of organic disease

Tuberculosis Association to Meet—The third annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held at the New Willard Hotel, Washington, D C, May 6 to 8, 1907 The secretary is Mr Livingston Farrand, 105 East Twenty second Street, New York The general meeting will open at 11 30 a m, Monday, with an address by the president, Dr Herman M Biggs Dr Lawrence F Flick will make a report on the International Congress on Tuberculosis, 1908 In the evening Dr Herman M Biggs will speak on "Compulsory Notification and Registration on Tuberculosis" Discussion will follow On Tuesday evening Mr Livingston Farrand will make an address on "The Campaign Against Tuberculosis in the United States" The Sociological Section, of which Paul Kennaday, New York, is chairman, and Christopher Easton, Mt Vernon, N Y, secretary, will meet Monday at 4 p m and Tuesday at 11 a m The subjects announced are

Tuberculosis Classes and Day Camps Dr Joseph H Pratt, Boston

Country Treatment of City Cases Dr B H Waters New York

A Working Program for a Small City Dr Oscar H Rogers Yonkers, N Y

Schools and Tuberculosis Dr John H Lowman Cleveland

Factory Inspection for Tuberculosis Dr Frank T Fulton Providence.

The Clinical and Climatological Section, of which Dr George Dock, Ann Arbor, Mich, is chairman and Dr Joseph Walsh Philadelphia, secretary, will meet Tuesday at 4 p m and Wednesday at 11 30 a m In addition to the reports of the committees on clinical nomenclature, medication and mixed infection, the following papers are announced

Some Experience with Tuberculin L Rosenberg Bedford Station N Y

The Varieties of Tuberculosis Dr Woods Hutchinson Redlands Cal

Phagocytosis etc in Sputum as a Measure of Resistance in Tuberculosis Dr Albert H Allen Saranac Lake N Y

Examination of Feces as a Means of Diagnosis in Tuberculosis Dr Myer Solis Cohen Philadelphia

The Pathological and Bacteriological Section, of which Dr Frank F Wesbrook, Minneapolis, is chairman, and Dr S Marx White, Minneapolis, is secretary, will meet Tuesday at 11 a m and Wednesday at 9 30 a m The following subjects are announced

Split Products of the Tubercle Bacillus and Their Effects on Animals Dr Victor C Vaughan Ann Arbor

Further Notes on the Technic of the Tuberculo-Opsonic Test Drs Hugh M Kinghorn and David C Twichell Saranac Lake N Y

Homologous Bacteria as a Vaccine in Tuberculosis (Preliminary Report) Dr Albert H Allen Saranac Lake N Y

Report from the Rockefeller Institute Dr Simon Flexner New York.

The Pleura Dr W B Stanton Philadelphia

Acute Miliary Tuberculosis without Tubercle Formation Dr A S Warthin Ann Arbor

The Blood in Tuberculosis Dr Frank A Craig Philadelphia

Occult Blood Findings in Tuberculosis Dr H R M Landis Philadelphia.

The Section on Tuberculosis in Children, of which Dr Thomas M Rotch, Boston is chairman and Dr Samuel S Adams Washington secretary, will meet Monday at 2 p m The following papers are announced

The Living Pathology of Tuberculosis of the Bones in Early Life Dr Thomas Morgan Rotch Boston

Recent Advances in the Knowledge of Tuberculosis in Children Dr Charles Hunter Dunn Boston

The Present Status of the Transmissibility of Bovine Tuberculosis as Illustrated by Infants and Young Children Dr Henry L K Shaw Albany

Tuberculosis of the Cervical Nodes and Infections from the Tonsils Dr Fred T Murphy Boston

Are Tuberculous Infants and Children in the First Five Years of Life Liable to be Sources of Infection? Dr Samuel S Adams Washington

The Surgical Section of which Dr William S Halsted Baltimore is chairman and Dr Hugh H Young, Baltimore secretary will meet Tuesday May 7 at 9 30 a m The following papers are announced

Present Status of the Opsonic Theory and the Treatment by Tuberculins Dr Rufus I Cole Baltimore

The Treatment of Bone and Joint Tuberculosis by Stauung Hyperemie Dr Schmieden Bonn Germany

The Use of the X Ray in the Treatment of Certain Forms of Tuberculosis Dr Henry K Pancoast Philadelphia

FOREIGN

International First-Aid Congress—The German "Samariterbund" has called an international conference of all leaders in the matter of first aid to the injured on sea and land The congress will convene at Frankfurt a M, in May, 1898 Mayor Adickes of Frankfurt is the chairman of the executive committee

Institute for Puericulture as Memorial to Budin—A committee has been formed in France to collect funds to found a practical school of puericulture to bear the name of P Budin, an enlargement of his idea of "nursing consultations" Senator P Strauss is chairman of the committee, and the publishing house of O Doin & Co, 8 Place de l'Odéon, Paris, has been appointed treasurer of the fund

Moebius Endowment—The friends of the late P J Moebius of Leipsic, whose death was mentioned in THE JOURNAL on page 541, issue an appeal for subscriptions to endow a Moebius prize to perpetuate his name The appeal is signed by Professor Ediger and others Dr Curt Reinhardt, Lessingstrasse, Leipsic, Germany, is the treasurer of the fund The intention is to found an annual prize for the best work on neurology or psychiatry, one year to be given for original works sent in competition, the next year for the best work published anywhere during the preceding two years

Approaching International Congress of Hygiene—The Fourteenth International Congress of Hygiene is to be held at Berlin, September 23 29, as already announced These congresses have been held in various countries, but this is the first time that Germany has been the host, and elaborate preparations are under way to add to the historic interest and practical benefits of the congress The Imperial Board of Health is getting out a *Festschrift*, as also the Imperial Board of Statistics The Prussian department of public instruction is also at work on a *Festschrift*, to be dedicated to the congress, and the city of Berlin is getting up a fourth

International Medical Association for Suppression of War—The annual meeting of this society, which has its headquarters at Paris, was held March 22, with the organizer and president of the association, Dr J A Rivière, in the chair Nine resolutions were adopted by the convention, among them one congratulating the president of the United States and the presidents of Mexico and Guatemala for their offer of arbitration to Honduras and Nicaragua, and congratulating the latter countries for their acceptance of the offer Another resolution congratulated "le grand journaliste, Stead pour sa superbe campagne pacifique auprès des gouvernants" The last resolution was a message of congratulation to Dr Senolo Murakamyi for his success in organizing a "Peace Association" in Japan The meeting is described in the *Progrès Méd* for April 6

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 13, 1907

Lord Lister's Eightieth Birthday

Lord Lister celebrated his eightieth birthday at his residence 12 Park Crescent Portland Place Many telegrams from all parts of London, the country and abroad reached him His apartments were decorated with floral offerings from professional and private friends and admirers To each bouquet was attached a card bearing a congratulatory message He received several deputations who presented addresses expressing high appreciation of his work Dr Charles Martin president of the Lister Institute of Preventive Medicine, which was founded by Lord Lister and a few colleagues, presented a letter recording the decision to signalize the anniversary by republishing all his works Lord Lister expressed himself greatly pleased by the compliment Mr Jonathan Hutchinson headed a deputation from the Royal College of Surgeons Professor Tilanus of Amsterdam presented an address from the physicians of that city Another address was presented by Dr Madsen of Copenhagen bearing the signatures of 1 000 Danish doctors Lord Lister briefly replied to all the congratulations and presentations saying how greatly he felt honored by them He enjoys excellent health, and may be seen daily talking walking exercise He is a somewhat broadly set man in quasi clerical attire, with a strikingly leonine but kindly head

The Manifesto on Alcohol.

As anticipated in a previous letter the manifesto signed by fifteen of the most eminent members of the profession advocating the use of alcohol has provoked a storm of contro

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versy in both the medical and the lay press A counter dec
laration has been issued by the British Medical Temperance
Association for advancing the practice of total abstinence
The main propositions in the manifesto are criticised as fol
lows (1) Alcohol is sometimes valuable as a drug This,
says the association, is much discussed in medical circles and
is not to be settled by ipse dixits, however eminent In large
hospitals the amount used has diminished from 20 to 70 per
cent during the last 20 years (2) It is said that the uni
versal belief that the moderate use of alcohol is beneficial
for adults is amply justified The belief is by no means uni
versal, millions believe to the contrary On the other hand,
the experience of several life assurance companies and friendly
societies shows that abstainers live longer, have less sickness
and recover more quickly than non abstainers Abstainers
can do more work and show greater endurance of cold, fatigue
and hardship than non abstainers In 1903 an international
medical manifesto was signed by many eminent English,
American and European professors and by 664 physicians
at the instance of the British Medical Temperance Association
This stated (1) That experiments have demonstrated that
small quantities of alcohol are injurious and that it is not a
food, (2) that it increases liability to disease and shortens
life On the other hand, those engaged in the liquor trade
have eagerly seized on the manifesto in favor of alcohol and
used it for all its worth The Licensed Victuallers' Central
Protective Association has reproduced it and distributed it
broadcast in leaflets On the other side the National Tem
perance League is about to hold a meeting to take decisive
steps to counteract the effect of the manifesto on the masses
At the annual meeting of the Society for the Study of Ine
briety, the President, Dr Harry Campbell, described the mani
festo as misleading and harmful Much of the whisky con
sumed he said, is raw, immature spirit, practically never
more than two or three years old Therefore, to say that the
moderate use of alcohol is beneficial is to encourage the
whisky drinking poor to poison themselves

Pharmacology

The Viavi Treatment

Yet one more of what Samuel Hopkins Adams in "The
Great American Fraud" calls the "fundamental fakes" has
been exposed The *California State Journal of Medicine* de
votes six pages in its April issue to showing up "Viavi," and
it is well done It appears that two astute and, since they
have made their millions, highly respected, men on the Pacific
Coast conceived the idea some years ago of instituting a
'treatment" for the ills peculiar to women This "treatment"
practically consisted—and, in great part, still consists—of pre
scribing vaginal douches But, of course, as our contemporary
says, "no large paying business could be built up by simply
selling a little good advice and a trifle of common sense
There must be something definite to take, some wonderful
secret and very costly remedy that will work the result, to
secure which the douche is but the merest preliminary Hence
the 'capsules' and the 'cerate' and the 'liquid' and the 'royal,'
and the rest of the wonderful remedies which, collectively,
leave little uncured or uncurable by Viavi"

So Viavi is bought and the douche is taken "The immedi
ate increase of personal comfort and many times the quick
relief from some annoying minor ailment, which follows this
exercise of cleanliness and common sense might so hypnotize
the average woman who accepts the Viavi preachments and
takes the Viavi 'treatment' that she would be ready to believe
almost anything the promoters care to tell her"

Inquiry was made as to whether the Viavi remedies con
tained morphin opium or any habit forming drug Nothing
of this sort was found in fact, as our contemporary says "It
was unnecessary to put an expensive article like morphin and
one liable to bring about trouble in the future, into their
'remedies when they do not need to"

Then the question was put Are the Viavi remedies used
for the prevention of conception? This query was answered
by a most emphatic denial The manufacturers were horri
fied at the thought of their remedy being put to such repulsive
and frightful misuse The questioners wondered in the face of
such evident righteousness on the part of the makers of Viavi
how they could have been led to think of such a thing The
thought may have been suggested by a paragraph in a book
let put out by these people, called "Viavi Hygiene" Here we
find that "the remarkable effectiveness of the Viavi
system of treatment places it in the power of health
wives to LIMIT THE NUMBER of their offspring for proper re
sons, and women who are not fit for maternity to AVOID it
natural means" [The small capitals are inserted for empha-
sis by the California journal]

An inability to correctly interpret what appears to be simple
English is the only excuse that the enquirers have to offer for
their unjust suspicions

Naturally after two such rebuffs the question arose What
is Viavi? In the language of its makers—who ought to know
—it "is purely a vegetable compound—more a food than a
medicine, and is prepared in a predigested manner, so that it
can be easily absorbed by the tissues of the body with which
it comes in contact" But on the other hand analytical chem
ists reported 'So far as we are able to determine, they con
tain nothing but the extract of hydrastis and cocoa butter"

But why quarrel about what this wonderful remedy is when
we know what it will *do*? Gynecology, after the universal
adoption of the Viavi treatment, will become a lost art and
the gynecologist who is referred to in Viavi literature as a
'body carpenter' will have to cease his sacrilegious "carpen
try," for "a very large proportion of women's diseases were
really incurable until the Viavi system of treatment was intro
duced"

But it is on the subject of etiology, pathology and treatment
of tumors that Viavi literature really distinguishes itself
Could the cancer commission be but persuaded to read this
enlightening treatise it would adjourn *sine die* Like all
great discoveries this one is remarkable for its simpleness
With the ingenuousness characteristic of great scientists the
vexed problem of tumor causation is explained as follows
"The cause of these growths (tumors), which by inspiring ter
ror drive so many women to a premature death by way of
the operating table is so simple a thing as a poor circulation
of the blood Tumors are caused by a stagnation of the venous
blood This important discovery on our part has
swept away the mist that has always surrounded this subject
and enabled us to accomplish the most remarkable cures

But not only will Viavi cause a diminution in the size of
tissues not wanted but *mirabile dictu* it will bring about an
increase in bulk in those tissues which are desired For, say
its exploiters we recall particularly the case of a man suffer
ing with wasting of the testicles who secured perfect recovery
from the Viavi cerate applied to the scrotum The delight
ful ambiguity of this sentence by the way is an illustration of
the shrewdness of their literature generally It will be noticed
that they do not say that the patient recovered from the con
dition for which he was treated but that he made a 'perfect
recovery from the Viavi cerate'

Where statements are made claiming more for the remedy
than even the gullible lists would be willing to swallow the
verbiage is so changed as to present the truth in the form of
a sell To say point blank that Viavi would cure ap
pendicitis paralysis locomotor ataxia *et al* would possibly
arouse a healthy skepticism which would prove unhealthy for
Viavi We are told therefore in one part of the literature
that all the diseases and many more proceed from a deple
tion of nerve force—from nervous debility while elsewhere
we are informed that Viavi cures nervous debility

Such is our western contemporary says is the language
which has made two men starting with practically nothing
affluent Their patrons consist of confiding [illegible] and self respect
women to whom not skilled in medicine their lit ratur
appeals"

We regret that we have not the space to quote the [illegible]
article It is also to be regretted that a reprint of it can [illegible]
be placed in the hands of those who [illegible]
effectively by this California [illegible]

Correspondence

Medical Practice Among the Maoris

AUCKLAND, NEW ZEALAND, Feb 25, 1907

To the Editor —In the January 12 number of THE JOURNAL I find an extract from the *British Medical Journal* on "Phthisis and Superstition Among the Maoris" Perhaps your readers may be interested in some observations by myself while acting as local native health officer for four years among these interesting people

All forms of tuberculosis are widespread among them, and even in localities where the conditions are naturally almost ideal for coping with this disease, it is increasing in all its forms The principal reason for this is their national custom of holding a "tangi" over the dead This consists of feasting and mourning of all the relatives of the deceased while the body lies in state, surrounded by weeping women and men who rub noses with one another, and cover and uncover the dead to show new arrivals No matter what the nature of the disease, this custom is not interfered with The police dare not interfere I was once called on to perform an autopsy on a native who had died suddenly without any apparent reason, and when I arrived where the body was lying in state in a tent I was refused permission to do anything and it was only after the police had been called and the tent cleared that I could get to work Half way through, the relatives returned with re enforcements to drive away the desecrating "pakeha tokuta" (whiteman doctor), and I had to be content with what I had done, especially as I had gone far enough to satisfy myself as to the cause of death The result of this was that those natives had no use for me afterward I was polluted and would pollute them if I touched them It is not the policeman that the native child is threatened with as a last means of coercion, but the "pakeha tokuta"

Once I was called in to a native hut to see a sick child, whom I found to be suffering from a psoas abscess This I opened, and for want of anything better at hand, gathered the pus in some absorbent cotton, and as the best means of getting rid of it, I put it in the cooking stove fire They took that stove out and would never use it again and not even the fireplace. It was "tabu" ever afterward

But the serious part of it is that their superstitions have such a hold on them that any wandering Maori "tohunga" (native doctor) who comes along with his incantations is allowed to take precedence and overrule the physician's authority and upset all his work. I once had as a patient a woman who was suffering from pneumonia I rode many miles on horseback to see her, as I wished to reward the husband for his confidence in coming to me early and before he went to the Maori "tohunga" (doctor) I stayed two days with the woman, and left her on the road to recovery, and with every hope that she would recover That night after I left she wanted to defecate, and could not be restrained from going to the customary place in the scrub a hundred feet or more from the house although it was raining hard She got rapidly worse and died They will not perform this act in a dwelling, for if they do the dwelling is unclean and can no longer be used as a dwelling

Before the white man came it was the universal custom of the expectant mother to go off with the husband to a secluded place in the bush near a stream After parturition which was always accomplished in the squatting position with the husband clasping his wife's abdomen from behind and aiding the expulsion by squeezing the woman would lie down in the running water and the husband knead her abdomen with his bare feet The baby would be washed in the running stream, and all three would go back to the pa

Never have I seen a Maori woman lie down as do white women after confinement They can not be kept down They sit up almost immediately and next day may be seen hanging out clothes on the line or doing something else just as unexpected

In times past the Maoris, both male and female, bore pain with the utmost stoicism I have opened a painful felon for a Maori maiden, who did not flinch any more than if I had only cut her nails, and who looked on at it all the time But these individuals are rare now One Maori came to me with a beautifully ripe boil on his wrist and told me that he wanted me to put something on it that would cure it at once His friend who came as interpreter said he would not have it cut, and knowing the native character well, I simply replied that I would give it only one touch with a remedy that would cure it at once They were pleased, and I made elaborate preparations to conceal my real intention, and at the crucial moment made a slash with my secreted knife He instantly fled howling like a madman, and I have not seen him since, but fortunately the other native was in sympathy with my action and I did not lose their confidence (as I properly deserved to), as the touch did all I said it would.

On another occasion I was called by an Irishman, who had married a full blooded Maori woman, to come and attend his wife in confinement She had been in labor for three days when he returned from a journey to find her surrounded by all the old Maori women in the district who had given up hope When I arrived on the scene they had all fled, for they recognized me from afar The Irishman, who had never attended an event like this before, although he had had fourteen children by this woman, was my only assistant After really throwing the woman, for she resisted like a fiend, I applied the forceps With the Irishman hanging on to her shoulders over the head of the bed, a baby was delivered of such dimensions that the father exclaimed when he saw it, "Docther, that's a man child sure!"

When a smallpox scare came on the country some four years ago, I was directed to vaccinate all the natives, both old and young, and strange to say, they took to this as ducks to water, and would arrive at my office or at the out stations in large parties of thirty to a hundred or more By selecting the youngest baby first and performing the act painlessly on him, I could do the rest, both old and young, without hearing a whimper, and that without any effort to do it painlessly, but rather with every effort to do it expeditiously

In the effort to get their names in order to record who had been vaccinated, I learned of a curious custom that prevails with them One was named "Four o'clock" He was so named when a baby because one of the family had been drowned at 4 o'clock in the afternoon Another was named "Glass," because at the time he was being fitted with a name a relative died and the coffin maker had sprung an innovation on the natives in the shape of a glass window in the coffin lid Another child was named "Boots" because a member of the family had died with his boots on I could recite numberless instances of this primitive way of originating new names

The "tohunga" is the medicine man of the Maoris and in him they have unshakable faith The "tohunga" makes most preposterous claims and has little difficulty in attracting a large following I have known one to call himself Jesus Christ and to claim power to work miracles He had a cure all which he compounded at the nearest saloon It consisted of something out of every bottle or receptacle containing liquor—beer, gin, whisky, brandy—some of each brand Sick natives at a distance would send him $200 and $300 to come and lay his hands on them This he would do with great solemnity and much quoting of scripture, and afterward spend the evening with his disciples in the nearest billiard room, interspersing his conversation with lurid oaths in the distraction of an exciting game

One of these "tohungas" once tore off the bandages and dressings I had placed on a badly burned limb and plastered it with the filthiest mud in the neighborhood In spite of this the burn healed and he was given credit for the cure

Once a Maori gets it into his head that he is going to die no "tohunga" nor the cleverest physician could save him however easy the task But once I knew of an old man whose relatives concluded he was about to die They gathered all the tribe from far and near and much food and made every preparation for a glorious "tangi" He lay in his hut unconscious of all that was going on, but accidentally learned

they had really begun a "tangi" on his account He said I will arise and help them, and he did He had not made up his mind to die, and since all preparation had been made and everybody invited, it could not be put off At these "tangis" sometimes six or seven hundred people will assemble and eat and drink almost continuously for days until the last scrap has been swallowed At one a year or two ago twenty sheep, thirty pigs, two cows, a ton of potatoes, a ton of kumaras (sweet potatoes), half a ton of flour and many tons of fruit and jam and other eatables were consumed All the food is prepared in the native fashion—in a hole lined with hot stones Meanwhile, the dead lies stinking right in the middle of this feasting

Like all superstitious peoples, they have a great horror of spirits, and I have yet to know the Maori who will venture alone in the dark

Some time ago a steamer, which had been chartered and loaded with 400 Chinese dead men who had been accumulating in New Zealand for some time, foundered off the coast near where I was stationed. Some of the boxes came ashore One was found by a European and Maori who were riding in company along the beach They naturally supposed they had found something valuable and opened the outer and then the inner casing, when they came on the lead lining The European then suspected what they had hold of and allowed the Maori to open the lead lining He did so, and as soon as he saw the shriveled up, parchment like features of the dead Chinaman, he sprang aside, ran for his horse, mounted and galloped away The beach is 70 miles long, and the European could see him riding for fully an hour as hard as he could make his horse go, and then he went out of sight And yet the Maoris are brave and resourceful in danger I have known them to exhibit courage equal in every degree to the best They have great love for their children, but care little for their old people

In conclusion, I will relate the experience I had with one of these medicolegal clerico-schoolmasters (I mean no reflection on them as a class) About 70 miles from my station was a native school with about 90 children in attendance Whooping cough was prevalent This man did what he could, but was foolish enough to think he knew everything and refused the assistance I was authorized to proffer him Everything went well until one day he bethought him to take the temperature of his charges He only had an ordinary wall thermometer in a metal case This he placed in the mouth of every youngster It was quite a mouthful He got an average temperature of 96 degrees He became alarmed and rode some miles to wire to Wellington, the capital of the country, that a large number of children were in a very serious condition and to plead for help I received an urgent message to travel fast to their aid All the patients came out to greet me mostly clad in shirts and some were very short shirts But for some severe coughing nothing seemed wrong, and perplexed and I turned to the schoolmaster for an explanation Well, it transpired that he had heard that no one could live long with a rise of temperature more than 7 or 8 degrees above normal, and he understood the normal temperature was 60 F This man was called by the natives a "pakeha Maori," which has much the same meaning as does "white trash" in some parts of the United States

Dr Pomare, the chief native health officer himself a half caste and educated in Chicago states that in thirty years there will not be a full blooded Maori in existence While they are building houses like those of the white man, they fail to ventilate or properly drain around them They often live day and night in the same clothes, frequently allowing wet clothes to dry on their bodies They alternately feast and starve After a "tangi" they will have little to eat sometimes for weeks together

The half castes are mostly delicate and tuberculosis is very prevalent among them The pulmonary form is the most common As they do not come under skilled care until well advanced nothing can be done to check it and they have lost faith in the ability of the "pakeha tohunga" to do them any good JOHN S REEKIE M D CH.M

A New Trypanosome.

OTTAWA, ONT April 19 1907

To the Editor —Pathologists will be interested in the information that the *Trypanosoma equiperdum* has been found in a mare clinically affected with dourine, or *maladie du coit* at the quarantine station established by this department at Lethbridge, Alberta, in 1904 The first demonstration was made by Drs E A Watson and M V Gallivan on Feb 11 1907, in material taken from a vesicle on the mucous membrane of the vagina of the animal above referred to which was found to be affected with dourine on the premises of her owner, Mr R Tiffin, near Lethbridge on Dec 21, 1906, and subsequently removed to the quarantine station for purposes of experimental observation

The disease was successfully transmitted in February to a yearling filly and the parasite subsequently observed in preparations from a fresh plaque The finding was confirmed by Dr C H. Higgins pathologist of the department, on March 21, and was further observed in preparations taken by him on March 23 and 25

The identity of dourine, or *maladie du coit*, as seen on this continent and hitherto diagnosed by American and Canadian veterinarians from clinical manifestations alone, with the disease as known in Africa and Asia, as well as in southern Europe, is thus fully established

A detailed report of the discovery and of the work which led up to it, as well as of the steps subsequently taken, will be issued at the earliest possible date

J G RUTHERFORD
Veterinary Director General

Association News

House of Delegates, Session of 1907

As a number of the state associations have not yet held their meetings for 1907 it is impossible to give at this time a complete list of the members of the House of Delegates for the Atlantic City session The following is a list of the hold over delegates and of the newly elected members who have been reported up to the time of going to press

ARKANSAS
E K Williams Arkadelphia

COLORADO
Hubert Work Pueblo
J N Hall Denver

CONNECTICUT
George R Shepherd Hartford

DELAWARE
Peter W Tomlinson Wilmington

DISTRICT OF COLUMBIA
George N Acker Washington

FLORIDA
Joseph N Porter Key West

GEORGIA
T D Coleman Augusta
T I Waring Savannah

IDAHO
R F Nourse Boise

ILLINOIS
George W Webster Chicago
J I Wiggins East St Louis
O B Will Peoria
Charles L Mix Chicago

IOWA
J F Perry Des Moines
William Jepson Sioux City

KANSAS
C F Powers Wichita

KENTUCKY
J Garland Sherrill Louisville
J N McCormack Bowling Green
W W Richmond Clinton

MAINE
F M Fuller Bath

MARYLAND
G L Taneyhill Baltimore

MASSACHUSETTS
Walter P Bowers Clinton
Frank C Wheatley North Abington
Edward H Bradford Boston
C H Cook Natick
R C Cabot Boston

MICHIGAN
A I Lawbaugh Calumet
Leartus Connor Detroit

MINNESOTA
John T Rogers St Paul
A I Spalding Luverne

MISSISSIPPI
John Darrington Vazoo City
W W Crawford Hattiesburg

MONTANA
Donald Campbell Butte

NEBRASKA
R C Moore Omaha

NEVADA
J F Hilliard Virginia City

NEW HAMPSHIRE
John M Gile Hanover

NEW JERSEY
Chas L Kipp Newark

NEW YORK
Wilmer I Torrey New York City
Abraham Jacobi New York City

J W Grosvenor Buffalo
D C Moriarta, Saratoga
Albert Vander Veer Albany
W S Ely Rochester
H L. Elsner, Syracuse.
A T Bristow Brooklyn
R Park Buffalo
H D Wey Elmira.

PENNSYLVANIA.

Fremont W Frankhauser Reading
Adolph Koenig Pittsburg
William T Williams Mt Carmel
Samuel Wolfe Philadelphia.
Alexander R. Craig, Philadelphia
George W Guthrie Wilkes Barre
Edward B Heckel Pittsburg
Walter Lathrop Hazleton

OHIO

Frank D Bain Kenton
A B Walker Canton

OREGON

H W Cole Portland

RHODE ISLAND

John Champlin, Westerly

TENNESSEE

T J Happel Trenton

TEXAS

J T Wilson, Sherman
C E Cantrell Greenville
A. C Scott, Temple.
S T Turner, El Paso
Frank Paschal San Antonio

UTAH

Philo E Jones Salt Lake City

VERMONT

J Henry Jackson Barre

WASHINGTON

N Fred Essig Spokane

VIRGINIA

Wm E Anderson Farmville

WISCONSIN

W H Washburn Milwaukee
W T Sarles, Sparta
B M Caples, Waukesha.

SECTIONS

HYGIENE AND SANITARY

Denslow Lewis, Chicago

SURGERY AND ANATOMY

F B Lund Boston

OPHTHALMOLOGY

Samuel D Risley Philadelphia

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION, ETC

Workingmen's Insurance in Germany

During a recent visit to this country Prof Frederich Müller read a paper at the Boston Medical Library on "Social Legislation in Germany and Its Influence on the Care of the Sick" It is significant that Professor Müller considered social medicine of sufficient importance as a subject for one of the few papers which he read in this country, instead of taking up some phase of technical work.

Professor Müller emphasized the fact that in Germany the relation between the medical profession and the state has assumed much greater importance than it has, as yet, in America National legislation along this line was begun in Germany in 1883, by providing for compulsory industrial insurance against disease, invalidism and old age, and accident. At present 15,000 000 people in the German Empire are protected by the first form of insurance Each individual who works for wages pays two thirds of the cost of his insurance, the other third being paid by the employer For this the employé receives free medical treatment and medicine, either at home or in a public hospital, for six months, if necessary He also receives half pay for the time for which he is incapacitated, and, if he dies within six months, a certain amount is paid to his family This form of insurance protects against acute diseases

A second form, which provides for chronic invalidism and old age, insures a certain amount to each working person of 70, as well as to persons under 70 who may be physically disabled Chronic and incurable diseases entitle the insured to a benefit, if he is incapable of earning one-third of the wages which he earned before contracting the disease This form of insurance is held by about 12,000,000 people, and the amount of benefit paid runs from $45 to $120 per year, one-half of which is paid by the employers and one-half by the employés

The third form of insurance is against accident The entire amount of the benefit in this case is paid by the employer The natural result is to stimulate every possible care regarding accidents and the use of all forms of safety devices on machinery A certain sum is paid for crippling and disabling injuries Professor Müller stated that while this plan naturally results in a considerable amount of malingering on the part of the employés, it is felt that the beneficial results outweigh the harmful In spite of the great increase in German industries the number of accidents have actually, as well as relatively decreased in the last years

An interesting feature of this plan of workingmen's insurance is its bearing on the medical profession The first arrangements provided that each insurance company organized under the protection and encouragement of the state should have a surgeon who should do all the work for that company This led to great reduction in fees, and finally to the "doctors' strike," concerning which so much has been said The result of the refusal of the physicians to work for the amount named was that the fees were raised and the patient was also given the right to choose his own physician

The experience of the profession and the public regarding workingmen's insurance in Germany is of interest to physicians in this country The workings of the German system should be carefully watched in order that if such a plan is ever inaugurated here we may profit by the lessons which have been learned in that country

One Physician's Influence

A striking illustration of the influence which physicians can have in public affairs is furnished by Dr George T McWhorter of Riverton, Ala, who for the last year has been president of the Medical Association of the State of Alabama, and who is also a state senator As president of the admirable organization of physicians in Alabama, Dr McWhorter is in a position to speak authoritatively in the state senate for his profession Among other bills which he has recently introduced is one providing for an epileptic colony for the care and treatment of epileptic patients, either at the public charge or at the cost of their friends The bill has the endorsement of the state association and will probably be passed.

Writing regarding the work of the legislature in his state, Dr McWhorter stated in a recent letter "Medical men have been sadly derelict in bringing to bear the influence on public affairs which should have been exerted by a learned and influential profession We have tamely relinquished almost all political power and influence until, as a profession, we have almost ceased to be a factor in shaping legislation We are largely to blame for this ourselves, as we have maintained an attitude of cold hostility toward any member of our profession who ventured to seek political preferment, no matter how able and well qualified he might be In the meantime we have begged favors when we should have been in position to have dispensed them

"We should not submit to being relegated to a subordinate position We should take a lesson from the legal profession on this subject We should steadily and persistently demand the establishment of a department of public health in the United States, with a representative of the first rank of our profession in the cabinet of the President. The necessities of the age demand this and it is due the medical profession Many of the most important problems of to day are sanitary and hygienic in character All thoughtful men now recognize the fact that the sanitary problems at Panama dominate and control the engineering difficulties, vast and complicated as the latter are The men who plan and institute sanitary measures of such transcendent importance to the success of military undertakings, as well as commercial and industrial enterprises, should receive proper recognition from the government they serve

"The domain of the legislator has been immensely widened The lawmaker now needs the assistance, counsel and advice which can only be had from the thoroughly trained medical man The legislation of the age should reflect the science of the age and conform to its medical needs It can not do so unless guided by men familiar with medical science and acquainted with its needs A department of public health in charge of a high grade physician, his annual reports to the President, to be in turn, transmitted to Congress, would set before our national legislators the demands of commerce as well as the medical needs of the people"

Dr E E Maxey, secretary of the Idaho State Medical Society reports the passage of a bill providing for a state board of health and making an appropriation for its support for two years Two bills introduced into the legislature which provided for serious modifications of the present medical practice act were killed in committee

Austin S Tinsley, M D University of Georgia, Medical De partment, Augusta, 1888, a member of the Georgia State and Richmond County medical societies, died at his home in Au gusta, April 16, after an illness of two weeks, aged 38

William W Genge, M.D Faculty of Medicine of Queen's Uni versity and Royal College of Physicians and Surgeons, Kings ton, Ont, 1891, died at his home in St Johnsbury, Vt, April 10, from pneumonia, after a short illness, aged 39

Dietrich C Husmann, M.D Western Reserve University Medical College, Cleveland, Ohio, 1879, at one time a member of the board of education, died at his home in Cleveland, April 12, from acute disease of the liver, aged 59

Raymond Palmer Robbins, M D Minnesota Hospital Medical College, College of Medicine and Surgery of the University of Minnesota, Minneapolis, 1904, died at his home in Portland, Ore, April 16, from spinal meningitis, aged 27

William Armes, M D (Licensed Kentucky, 1867), a member of the Grayson County (Ky) Medical Society, died at his home in Shrewsbury, Ky, March 6, from pneumonia, after an ill ness of six days, aged 77

F P Brunthaven, M.D Medical Department of Western Re serve University, Cleveland, Ohio, 1889, of Tomales, Cal, died from appendicitis at the French Hospital, San Francisco, April 4

Oliver Crook Haugh, M D Louisville (Ky) Medical College, 1893, convicted of the murder of his father, mother and brother in 1905, was electrocuted at Columbus, Ohio, April 20

Jason L Edgar, M.D University of Missouri Medical Depart ment, Columbia, 1875, died suddenly at his home in Clear water, Fla, March 13, from cerebral hemorrhage, aged 63

Thomas S Parr, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1886, died at his home in Indianola, Iowa, January 2, from appendicitis, aged 64

Henry Swayer Hahn, M.D Indiana Medical College, La Porte, 1848, city physician of Chicago in 1870, died at the residence of his daughter in that city, April 17, aged 81

Jerome B Lawrence, M.D New York Homeopathic Medical College and Hospital New York City, 1885, died at his home in Brooklyn, N Y, April 11, after a long illness

William S Patterson, M D Medical College of Ohio, Medical Department of University of Cincinnati, 1853, died at his home in Hillsboro, Ohio, Dec 30, 1906, aged 76

G Hamlin Anderson, M D Hahnemann Medical College and Hospital of Chicago, 1886, died at his home in Seneca, Kan, April 9, after an illness of four years, aged 46

Edward P Miller, M D Hahnemann Medical College and Hospital Chicago 1871 for many years a practitioner of Chi cago, died in Denver, Colo, April 15, aged 65

G W Mason, M D Chicago Medical College, 1880, for many years a prominent physician of Monroe County, Ohio, died at his home in Stafford, April 8, aged 80

Emory W Blackburn, M.D Eclectic Medical Institute, Cin cinnati, 1885 died at his home in Latrobe, Pa, April 4, from septicemia, due to a carbuncle

John L Brown, M D University of Nebraska College of Medicine, Lincoln and Omaha, 1904, died at his home in West- ern Neb, February 4

A Theodore Braxton, M D Meharry Medical College, Nash ville, Tenn 1897 died at his home in Columbia, Tenn, April 8, from tuberculosis

Helene C Byington, M.D Boston University School of Medi cine, 1896, died at her home in Montrose, Colo, April 13, from influenza, aged 47

William F Noe, M.D Barnes Medical College, St Louis 1901, was shot and killed in his office in Mountain Home, Ark, February 8, aged 38

Charles Eugene Casgrain, M D McGill University Medical Faculty Montreal, 1851, died at his home in Windsor, Ont, March 8, aged 82

J A Meek, M.D Southern Botanico Medical College, Macon Ga 1871, died at his home in Jonesboro, Ark., recently aged 76

Death Abroad.

Thomas Henry Wakley, F.R.C S., senior editor and proprie tor of the *Lancet* died at his residence in Queen's Gate, London on April 5, aged 86 He was the eldest son of Thomas Wakley the founder of the *Lancet* and well known coroner and member of Parliament, who was associated with all the advanced po litical movements of the early Victorian days He was edu cated at University College, London, became a member of the College of Surgeons in 1845, and a fellow four years later In 1848 he was appointed surgeon to the Royal Free Hos pital, where he established a reputation as a skilful opera tor He devoted himself specially to aural surgery and ortho pedics and attained an extensive practice On the death of his father, in 1862, he became manager of the *Lancet*, his younger brother, Dr James Wakley, being the editor His new duties led to the gradual abandonment of practice, and in 1886, on the premature death of his brother, he took over the editor ship of the paper in conjunction with his son Under this joint editorship the journal has progressed on the lines laid down by its founder, and has maintained the highest posi tion from all standpoints—scientific, literary and ethical Like most successful editors, Mr Wakley did not write much, but he was skilful and keen in discovering men who could write and what they could write Like his father, he was bold in exposing public evils His principal original work was an article on "Diseases of Joints," contributed to Samuel Cooper's "Surgical Dictionary," then the standard work on surgery in England His sympathy with the profession was shown by many private acts of generosity as well as by the foundation of the *Lancet* relief fund, contributed entirely by himself and his son to meet unforeseen and urgent pecuniary exigencies among members of the profession His activity, physical and mental was unbounded He was never ill and never absent from his duties Even in his eighty second year he journeyed to the office daily from Brighton (where he spent the sum mer) He leaves a widow, a son, Thomas Wakley, Jr, who has been for twenty years his father's colleague in the editor ship of the *Lancet*, and a daughter

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The Public Service

Army Changes

Memorandum of changes of stations and duties of medical of ficers U S Army for the week ending April 20, 1907

Snyder Henry D surgeon granted thirty days leave of absence, with permission to apply for fifteen days extension

Usher F M C asst surgeon relieved from duty at Fort Brady Mich and will proceed to San Francisco and report not later than April 29 1907 to the medical superintendent Army Transport Service that city for duty as surgeon transport *Buford* during the voyage of that vessel to China and the Philippine Islands On arrival at Manila Captain Usher will report in person to the com manding general Philippines Division for assignment to duty

Bloombergh Horace D asst. surgeon detailed as a member of the examining board appointed to meet at Fort Riley, Kans, vice Captain Elmer A. Dean asst surgeon hereby relieved.

Whitmore Eugene R asst surgeon relieved from duty at Fort Jay N Y and ordered to Fort Riley Kans for duty

Dean Elmer A. asst. surgeon granted ten days leave of absence

Bosley John R. asst. surgeon left Jefferson Barracks Mo on ten days leave of absence

Adair George W asst surgeon general granted fifteen days leave of absence

Wadhams S H asst surgeon granted leave of absence for one month on surgeon s certificate of disability

Girard Joseph B asst surgeon general on the expiration of his present leave of absence, will proceed to Atlanta Ga and report in person to the commanding general Department of the Gulf for duty as chief surgeon of that department, relieving Lieutenant Colonel William W Gray deputy surgeon general

Gray William W deputy surgeon general on being relieved from duty as chief surgeon Department of the Gulf by Colonel Joseph B Girard asst surgeon general will proceed to Omaha and report in person to the commanding general Department of the Missouri for duty as chief surgeon of that department relieving Lieutenant Colonel John M Banister deputy surgeon general

Banister John M deputy surgeon general on being relieved from temporary duty as chief surgeon Department of the Missouri by Lieutenant Colonel William W Gray deputy surgeon general will return to his proper station Fort Riley Kans

Flagg Charles F B asst surgeon granted leave of absence for four months to take effect on or about May 1 with permission to apply for an extension of one month

Bell Richard P contract surgeon ordered from Fort Wads worth N Y to temporary duty as surgeon of the transport *Kil patrick*

Johnstone Ernest K contract surgeon ordered to accompany troops to duty in Yosemite National Park

Bell Leonard P contract surgeon relieved from duty in the Philippines Division and ordered to Fort Riley Kans for duty

Newton Ralph W contract surgeon relieved from duty at Fort Niagara N Y and ordered home Barre Vt for annulment of contract

Wren Raphael J contract surgeon ordered to Fort Totten N Y for duty

Rebert Michael A contract surgeon relieved from duty at Fort Totten N Y and ordered to Fort Terry N Y for duty

Suggs Frank contract surgeon relieved from duty at Fort Terry N Y and ordered to Fort Niagara N Y for duty

Card Daniel P contract surgeon ordered to Fort Jay N Y for duty

Tyler George T contract surgeon left Fort Monroe Va for duty at West Point N Y

Stephenson Andrew V contract surgeon ordered from Cre- ford Neb to San Francisco for duty in the Department of Cali fornia

Stallman George E dental surgeon left Fort McIntosh Texas for duty at Fort Reno Okla

Voorhies Hugh G dental surgeon arrived at San Francisco Cal on the transport *Logan* for treatment at the General Hospital San Francisco

Patterson Edwin W contract surgeon arrived at San Francisco on the transport *Logan* on leave of absence for three months

Navy Changes

Changes in the Medical Corps U S Navy for the week ending April 20 1907

Gatewood, J D surgeon ordered to additional duty in the Bureaus of Medicine and Surgery Navy Department.

Bertolette D N, medical director sick leave further extended three months

Delancy C H P A surgeon ordered to Naval Medical School Hospital Washington D C. for treatment and observation.

Downey J C assistant surgeon granted leave for one year from April 15

McGuigan J H, pharmacist, granted sick leave for three months

Spear R surgeon when discharged from treatment at the Naval Hospital Mare Island Cal ordered home and granted sick leave for two months

Public Health and Marine Hospital Service.

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine Hospital Service for the seven days ended April 17 1907

Carrington P M surgeon granted leave of absence for 3 days from April 15 1907 under Paragraph 189 of the Regulations

Fox Carroll P A. surgeon granted an extension of leave of absence for 15 days from April 29 1907

Berry T D P A surgeon granted leave of absence for 1 day

Stimson, A M asst. surgeon leave of absence granted for 7 days from April 6 1907 under Paragraph 191 of the Regulations amended to read for 5 days

Rucker W C asst. surgeon directed to proceed to Norfolk Va and assume charge of the Service exhibit at the Jamestown Ter Centennial Exposition at Hampton Roads Va

Ward W K. asst. surgeon granted leave of absence for 1 month or so much thereof as may be necessary on account of sickness from April 7 1907

Salmon T W asst surgeon granted leave of absence for 10 days from April 19 1907

Walker T Dyson acting asst surgeon granted leave of absence for 9 days from April 12 1907

Holt F M pharmacist authorized to proceed to New Orleans special temporary duty once each month for 3 months on completion of which to rejoin station

BOARDS CONVENED

A board of medical officers was convened to meet at Wilmington N C April 15 1907 for the physical examination of an officer of the Revenue-Cutter Service Detail for the board P A Surgeon C H Lavinder chairman

A board of medical officers was convened to meet at Seattle Wash April 19 1907 for the purpose of examining an alien immigrant. Detail for the board P A Surgeon J H Oakley chairman Asst Surgeon H G Ebert Acting Asst Surgeon F R Underwood Recorder

Health Reports

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended April 19 1907

SMALLPOX—UNITED STATES

California San Francisco March 23 30 1 case

Florida Duval County Jacksonville March 30 April 6 13 1 case 1 death Hillsboro County April 6 13 7 cases Polk County April 6 13 7 cases Santa Rosa County April 6-13 6 cases

Georgia Augusta April 2 9 1 case

Illinois Chicago March 30 April 13 4 cases Galesburg March 30 April 6 3 cases Peoria March 30 April 6 17 cases

Indiana Indianapolis March 31 April 7, 4 cases South Bend March 30 April 6 2 cases

Iowa Everly March 30 present Spencer March 30 present.

Kentucky Louisville March 28 April 11 11 cases

Louisiana New Orleans March 30 April 6 3 cases

Massachusetts Chelsea March 30 April 6 8 cases Haverhill March 30 April 6 1 case Lawrence March 30 April 6 27 cases

Michigan Detroit March 30 April 13 12 cases

Minnesota Winona March 30 April 6 2 cases

Mississippi Natchez March 23 April 6 1 case

Missouri St Joseph March 30-April 6 9 cases St Louis March 30 April 6 4 cases

New Jersey Hoboken April 6-13 1 case

New York New York March 30 April 6 4 cases

North Carolina Charlotte March 30 April 13 2 cases

Ohio Cincinnati May 29 April 5 1 case Cleveland May 24 April 12 2 cases

Tennessee Nashville April 6-13 1 case

Texas Bell County March 23 April 6 206 cases Galveston April 5 5 cases San Antonio December 29 April 6 9 cases

Washington Spokane March 30 April 6 6 cases (1 imported)

Wisconsin Appleton March 30 April 6 1 case Milwaukee March 23 30 5 cases

SMALLPOX—INSULAR

Porto Rico San Juan April 2 13 cases

SMALLPOX—FOREIGN

Brazil Rio de Janeiro March 3 10 1 death

Canada Winnipeg March 30 April 6 2 cases

China Niuchwang January 11 February 7 present Shanghai February 27 March 9 1 case 7 deaths

Egypt Cairo March 11 18 1 case

France Marseilles March 1 31 238 deaths Paris March 16-23 12 cases.

India Bombay March 5-12, 1 death Calcutta February 23 March 9 68 deaths Rangoon February 23 March 9 1 death

Italy General March 21 28 22 cases Turin March 9 16 1 case.

Mexico Aguas Calientes March 23 30 6 deaths Mexico City March 2 9 12 deaths Tuxpam March 26-April 2 2 deaths.

Portugal Lisbon March 16-23 12 cases

Russia Moscow March 2 16 4 cases 1 death Odessa March 9-16 32 cases 2 deaths Riga, March 16-23 2 cases St Petersburg March 9-16 1 death Warsaw February 23 March 9 11 deaths

Spain Valencia March 17 24 3 cases

Brazil Rio de Janeiro March 3 10 1 case 1 death

CHOLERA

India Bombay March 5 19 4 deaths Calcutta February 28 March 2 33 deaths Madras March 2 8 10 deaths Rangoon February 23 March 9 29 deaths

PLAGUE—INSULAR.

Hawaii Honolulu April 15 2 deaths

PLAGUE—FOREIGN

Australia Queensland—Brisbane February 2 9 3 cases 1 death Port Douglas February 2 9 6 cases New South Wales—Sydney February 2 9 4 cases 1 death Kempsey February 2 9 4 cases 3 deaths

Brazil Rio de Janeiro March 3 10 6 cases 2 deaths

Egypt Ismailia March 10-April 6 3 cases 2 deaths Port Said March 8 17 1 case 2 deaths Assiout Province March 8 16 15 cases 7 deaths Beni Souef Province March 12 19 4 cases 3 deaths Girgeh Province March 9 16 30 cases 23 deaths Kench Province March 11 18 26 cases 20 deaths Minieh Province March 13 18 2 cases 1 death

India General March 2 9 3 426 cases 2 971 deaths Bombay March 5 19 978 deaths Rangoon February 23 March 9 124 deaths

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION Atlantic City June 4 7

Association of American Medical Colleges Washington May 6
American Therapeutic Society Washington May 4 7
Amer Assn of Genito Urinary Surgeons Washington May 7 9
Am Assn of Pathologists and Bacteriologists Washington May 7 9
Amer Climatological Association Washington May 7 9
American Gynecological Society Washington May 7 9
Amer Laryngological Association Washington May 7 9
Amer Medico-Psychological Association Washington May 7 9
American Ophthalmological Society Washington May 7 9
American Orthopedic Society Washington May 7 9
American Pediatric Society Washington May 7 9
American Assn of Physicians Washington May 7 9
American Surgical Association Washington May 7 9
Nebraska State Medical Association Omaha May 7 9
Texas State Medical Association Mineral Wells May 7
Utah State Medical Association Salt Lake City May 7 8
New Mexico Medical Association Las Cruces May 8 9
Kansas Medical Society Kansas City May 8 10
Oklahoma State Medical Association Shawnee May 14 17
North Dakota State Medical Association Minot May 14 15
Louisiana State Medical Society New Orleans May 14 16
Arkansas Medical Society Little Rock May 15 17
Iowa State Medical Society Cedar Rapids May 15 17
Michigan State Medical Society Saginaw May 15 16
Missouri State Medical Association Jefferson City May 14 16
Montana State Medical Association Billings May 15 16
New Hampshire Medical Society Concord May 16 17
West Virginia State Medical Association Huntington May 1 [illegible]

MEDICAL ASSOCIATION OF GEORGIA

Fifty Eighth Annual Session held at Savannah April 17 19, 1907

The President Dr H H MARTIN Savannah in the Chair

After the customary address of welcome the reading of papers began the scientific work being divided into two sections medical and surgical

The Training of Epileptic and Feeble Minded Children

DR. WESLEY TAYLOR, Atlanta advocated a state school for the feeble minded and epileptic open and free to any one in the state either to train their children up to a certain standard of efficiency or to relieve them of their embarrassment He

asked the cooperation and endorsement of the association Manual training is at length beginning to be appreciated and valued as it deserves, and in connection with other training it is intended to teach some useful and simple trade to those capacitated for such work

DR. H D ALLEN, Milledgeville, thinks it is incumbent on the state to establish a colony for the epileptic and feeble minded. It is known how much good has been done for the deaf and dumb The deaf and dumb can be taught to read and write by experienced teachers Feeble minded children can not be properly cared for at home, for the reason that members of the family are too indulgent or too harsh They do not regard the children as defective, they think many of the things they do are done through pure meanness or are prompted by an evil spirit

DR R. R KIME, Atlanta, said it is time the Medical Association of Georgia and the state at large should awaken to its duty along humanitarian lines The epileptic or feeble minded children are not responsible for their condition, they are brought into the world with defects they can not themselves eliminate, and physicians as representatives of one of the great professions of the state have a duty and responsibility resting on them which they can not shift without doing themselves an injustice There is no class of defectives that need the sympathy and support of the medical profession, as well as the people of the state, more than the epileptic and feeble minded

Dr Kime offered a resolution to the effect that the association endorse the idea of requesting the establishment of a state colony for epileptics and an industrial school for feeble minded This resolution was unanimously carried

The Soda Fountain and Its Attendant Evils

DR J A COMBS, Locust Grove, read a paper on this subject He finds that the soda fountain has nothing for which to commend itself either to the medical profession or to the public, but he thinks the following serious objections may be justly urged against it It fosters the nostrum evil, it is a fruitful source of nervous and digestive disturbances, by its filthiness it may be and probably is the means of spreading infectious diseases It offers opportunity for the illicit sale of whisk ies and other narcotics The powerful drugs dispensed in the "patent" or secret drinks create a thirst which leads to crime and disgrace It affords opportunity or undesirable commingling of the sexes It paves the way for the wine and beer garden, and at last for the saloon.

The Doctor in Relation to Exercise as a Factor in Medicine and Surgery

DR THEODORE TOEPEL, Atlanta said the orthopedic surgeon needs exercise and massage in his corrective work Lateral curvature of the spine is no longer treated by braces exclusively, but by gymnastics, sometimes in connection with other measures it is true, but always by exercise in some form The author explained the physiology of exercise and its therapeutic applications He divided the system of exercise into passive, active and resistive, each division being discussed at length

(To be continued)

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy fourth Annual Session, held at Nashville, April 9 11 1907

(Concluded from page 1372)

Tuberculosis of Kidney

DR RICHARD DOUGLAS Nashville impressed on the general practitioner the importance of collective evidence and of a correct history in diagnosis The patient, in 75 per cent. of the cases is a woman between the ages of 20 and 40 Careful investigation will reveal the history of some rather protracted and unexplained illness, a decline in health for some months Not infrequently the onset is more acute, and the febrile state is mistaken for some of the essential fevers, as in two of his patients He called attention to polyuria, occurring particularly at night The voiding of large quantities of clear urine is quite suggestive, indicating the stage of irritation which is followed later by congestion If the urine is examined, microscopic quantities of blood will be found, but the characteristic of the hematuria in renal tuberculosis is a spontaneous occurrence of a quantity of free blood sufficient to be detected with the unaided eye This bleeding is not induced by exercise or exertion, it merely marks the early stage of invasion of the kidney Ureteral catheterization is not an essential, though a great aid to specific diagnosis In 80 per cent of the cases only one kidney is affected Radical removal of the diseased kidney and ureter by lumbar nephrectomy should be undertaken at once, the condition of the patient permitting it Nephrotomy or partial nephrectomy is dangerous

Tuberculosis in the Negro

DR E H JONES, Murfreesboro, said that one feature with reference to tuberculosis in the negro race is that a large proportion of the cases are of the acute phthisic variety, running a rapid and fatal course, yielding little to the measures usually instituted Those who are familiar with the habits of this race know their morbid proclivities for crowding around their sick and attending the funerals in crowded houses, illy ventilated, and not in the best of sanitary conditions He believes that every house, tent or apartment used for dwelling purposes, when vacated, should be thoroughly disinfected before being occupied again From observation, this is one of the most dangerous sources of contamination This applies to public carriers, hotels passenger trains, day coaches, sleepers, passenger boats and steamers, railroad stations, etc

Lesions of the Prostatic Urethra and Their Reflex Neuroses.

DR JERE L CROOK, Jackson, said his attention was first directed to the prostatic urethra as a causal factor in neurasthenia and other neuroses about four years ago, when treating a college student for nightly seminal emissions The history of the case was negative as to any form of venereal disease The patient had practiced masturbation more or less By means of a direct light urethroscope he found it easy to examine the entire urethra Examination made after cocainizing the urethra and performing meatotomy disclosed a hyperemic area about one inch long in the prostatic urethra This was extremely sensitive The diseased patch included the point of entrance of the seminal duct By the use of nitrate of silver solutions of varying strength he was enabled to cure the local conditions and when this was done the other symptoms vanished No other treatment was required Since then he has successfully treated a number of cases according to this plan

Surgery of Prostate

DR. W A BRYAN, Nashville, said the method of removal of the prostate depends on the operator The results of the suprapubic and the perineal routes are slightly in favor of the latter The mortality of either is small compared with non-operative treatment Fistulas are seen occasionally, but they do not usually persist long, and when they do, can usually be relieved by curetting away their lining If they do persist, it is better to have a vent through two openings than one Not every patient can stand a prostatectomy, then permanent drainage may be instituted, or, if preferable, a two-time operation may be executed after the suggestion of Chetwood When the patient is very feeble he will improve by simply draining the bladder either suprapubically or perineally This may be done, and after a sufficient lapse of time, if the symptoms subside sufficiently, a complete removal of the gland may be done with a much lower mortality than would have been possible Every step should be taken during the interim to assuage the infection of the bladder and kidneys and to build up the patient's resistance for the more serious undertaking In all very old men it is preferable to do some minor operation, prolong life and relieve pain even if only with halfway comfort than to attempt the ideal treatment and fail He condemned the partial excision of a large prostate in those patients whose condition warrants radical measures

Suprapubic Prostatectomy

Dr Cooper Holtzclaw, Chattanooga, described the technic and advantages of the suprapubic operation, and among other things said it requires no skilled assistants and no special instruments to do this operation The only grave danger is entering the abdominal cavity The whole operation need not take but a few minutes If, however, the patient is old and feeble and exhausted by long and continued suffering and infection, the operation can be done in two stages He most earnestly recommended this plan, as he had pursued it several times, opening the bladder under cocain anesthesia, letting the patient recuperate from all his troubles, and then in a week or two removing the prostate under general anesthesia He uses no drainage tube He seldom finds it necessary to irrigate the bladder He lets the bladder wound heal slowly by granulation, which is usually accomplished in from four to six weeks, by which time the wounds in the bottom of the bladder will have healed and contracted, thereby making a complete and effectual exit to the urethra He allows the patient to sit up in three or four days, when he can be taught to take care of himself The lack of experience, the rapidity and facility of the operation, the freedom from hemorrhage and unpleasant sequelæ, the more perfect drainage and satisfactory results, all appeal to him in recommending this method of operating

Researches in Rabies.

Dr. William Litterer, Nashville, discussed the significance of the Negri bodies, the diagnosis of rabies, and then referred to his original experimental work He said (1) It is the consensus of opinion that the Negri bodies are the true etiologic factors in rabies (2) They are living organisms belonging to the class of protozoa (3) When found in smears or sections of the central nervous system, they are specific for this disease (4) These bodies have never been found in other diseases than hydrophobia

Recurrent Non Malarial Hematuria

Dr. T J Happel, Trenton, emphasized the necessity of careful diagnosis in differentiating the forms of recurrent non malarial hematuria He said that the use of the microscope is most essential, because a careful examination will, in some cases, reveal the presence of some parasite other than the malarial hematozoon The fact that some of these cases are cured by methylene blue may be taken as strong presumptive evidence that the condition is caused by the schistosoma hematobium

Cancer of the Breast.

Dr. W D Haggard, Nashville pointed out the factors which influence the permanence of cure in operations for carcinoma of the breast It may be stated as an axiom that cancer is an entirely curable disease when situated in an organ or tissue which of itself is completely removed without causing death, and if there is lymphatic involvement of the immediate tributary lymph glands, that they also are thoroughly removable The younger the patient the worse the prognosis In elderly persons, where there is a general atrophy of the lymph system and changes in all the vessels, dissemination is more slow Cancer will remain local a longer period of time in the older patient, and the prognosis is better The contraindications to operation were enumerated and the details of the operation described

Other Papers Read

The following papers were also read

Non Infectious Sclerotic Ovary by John A Gaines, Nashville The Practical Use of Opsonic Treatment in Certain Specific Infections Especially Those of the Skin" by Dr J M King Nashville "Treatment of Fractures of the Hip by Dr C N Cowdon Nashville Surgery of the Thyroid Gland by Dr Charles H Mayo Rochester Minn Foreign Bodies in the Larynx and Trachea by Dr M M Cullom Nashville Headaches" by Dr Hazel Padgett Nashville Inversion of the Uterus Reports of Two Cases by Dr B V Dickson Covington True Croup (Non Diphtheritic) by Dr Walter Dotson, Kempville "Appendicitis by Dr R J McFall Cumberland City "Local Anesthesia by Dr Paul DeWitt Nashville "The Etiology Pathology and Prophylaxis of Puerperal Eclampsia by Dr C W Moody Shelbyville Report of an Unusual Case of Ununited Fracture of the Humerus by Dr Duncan Fee Nashville The Differential Diagnosis of Multiple Neuritis and Muscular Atrophy" by Dr D R Nell Nashville An Ovarian Cyst Cast of the Abdominal Cavity by Dr Wm D Sumpter Nashville Glaucoma" by Dr J T Herron Jackson "Cerebrospinal Meningitis by Dr William McCague Nashville

Book Notices

Diseases of the Lungs Designed to be a Practical Presentation of the Subject for the Use of Students and Practitioners of Medicine. By Robert H Babcock A M. M D., Consulting Physician to Cook County Hospital. Twelve Colored Plates and 104 Text Illustrations First Edition Cloth. Pp 800 Price $6 00 New York D Appleton & Co 1907

This is designed to supplement Dr Babcock's book on "Diseases of the Circulatory System" and covers the subject of the diseases of the lungs rather thoroughly with the exception of the diseases of the pleuræ to which are devoted but seventy of the 770 pages which comprise the text The chapters on bronchitis are fairly complete, though necessarily abbreviated, particularly the one on bronchial asthma In his preparation of the text of these chapters the author has relied largely on the writings of Hoffmann and of Lenhartz. In general, however, and be it added much to his credit, he has been not so much a searcher of medical literature as a student of individual patients

The chapters on Acute Fibrinous Pneumonia are far better than the single chapter devoted to Acute Bronchopneumonia Pulmonary emphysema seems to the reviewer rather slighted inasmuch as it is of much clinical interest by reason of its frequent occurrence For example, its relative importance demands a greater amount of space than is given to atelectasis and pneumonoconiosis The best portion of the book by far is that which is devoted to pulmonary tuberculosis, and we are especially pleased to see the author's advocacy of infection as opposed to the old idea of hereditary predisposition The chapter devoted to the physical signs and clinical varieties of pulmonary tuberculosis is the best chapter on physical diagnosis in the book That devoted to the treatment of pulmonary tuberculosis embraces all of the modern methods in regard to the best way of managing this dread disease The author is not so fortunate in his description of acute miliary tuberculosis, which includes less than three pages This is by no means an uncommon infection and is less frequently diagnosticated than it should be Surely, in comprehensive works like this one of Dr Babcock's more than fourteen lines should be given to the physical signs of acute miliary tuberculosis yet that amount is all that appears in the text Indeed, in general, one could wish that less space had been surrendered to symptomatology, so that more might have been left for physical signs

Mechanically, the volume is well gotten up The fact that the author mentions the names of physicians who have from time to time called him as a consultant seems open to criticism What benefit the names and home addresses of such physicians can be to the general reader is hard to estimate In the interest of brevity, if for no other reason these names should be omitted The style of the book is excellent Indeed at times the author's elegance and fluency get the better of strength and force Things which should stand out ruggedly are by the ease and flow of language so smoothed down that their relative importance is lost sight of There is not a single epigram in the book for this same reason

Tumors Innocent and Malignant Their Clinical Character and Appropriate Treatment By J Bland Sutton F R C S Surgeon to and Member of the Cancer Investigation Committee of the Middlesex Hospital Fourth Edition with 3[illegible] Engravings Cloth Pp 675 Price $4 50 net. Chicago W T Keener & Co 1907

This book now in its fourth edition is of value chiefly because of the interesting manner in which a varied clinical experience with tumors has been utilized in the presentation of the subjects discussed In no sense however is the work complete and it is far from being up to date Histological considerations are scanty and uninstructive and the majority of the illustrations of microscopic sections are pathetically poor The important features of tumor biology are entirely neglected or discussed in a most superficial manner and the author disregards almost entirely the essential features of histogenesis A few references are attached to each chapter but they are of little value consisting of a most haphazard collection of articles largely reports [illegible] ish literature while important contributions [illegible] collections written in other languages [illegible]

From the standpoint of the pathologist this book contains little that would cause him to recommend it either to elementary students or to men engaged in research It does contain considerable information that will be found useful to the practitioner and surgeon, but the lack of completeness and its general superficiality will be at once evident to the man of much training and experience. A feature of value to the general practitioner is the method of considering the various sorts of tumors, particularly with reference to the different organs and tissues they attack, which enables one to readily acquaint himself with the relative prevalence of different sorts of tumors in each part of the body Teratoid growths have received particular attention, as also have odontomas

The defects are largely those of omission rather than of commission, for there are few erroneous statements, however, many good authorities would challenge the dictum that an adenoma never becomes transformed into a cancer (p 267) One also occasionally notes with pleasure certain advanced ideas, e g, the statement that "it would be convenient and perfectly justifiable to deprive myxomata of even the rank of species among tumors" (p 60) The favorable results from local removal of giant cell sarcoma of bone and the usual absence of true malignancy in this form of tumor, is also well brought out, although no reference is made to certain important contributions to this subject

PROGRESSIVE MEDICINE Vol 1 March 1907 A Quarterly Digest of Advances Discoveries and Improvements in the Medical Sciences Edited by Hobart Amory Hare M D Professor of Therapeutics and Materia Medica in Jefferson Medical College Paper Pp 280 Illustrated Per annum in four cloth bound volumes $9 00 in paper binding $6 00 Philadelphia Lea Bros & Co

In this issue Dr C H Frazier, in the Department of Surgery of the Head, Neck and Thorax, presents a complete review of the practical bearing of edema of the brain in early operations for intracranial injuries, and gives a résumé of 530 cases of fractures of the base of the skull Among other topics discussed are the following Results of thyroidectomy in over a thousand cases, a summary of 16 cases of suture of the heart, operations on the pituitary body, trifacial neuralgia, epilepsy and cerebral abscess Dr Robert H Preble devotes considerable space to the part taken by insects in the transmission of various infectious diseases Dr Floyd M Crandall discusses the incidence of disease in childhood, infantile mortality, the tonsil as a portal of microbic infection, hernia in young children, enuresis, infant feeding, the management of infants in hot weather, etc The Department of Rhinology and Laryngology is covered thoroughly by Dr D Braden Kyle, and the Department of Otology by Dr B A Randall The latter reviews 645 cases of brain abscess Dr Kyle discusses the use of chlorid of sodium in the treatment of chronic laryngitis and reports a case of inoperable cancer treated with a bacterial vaccine made from a micrococcus neoformans

PEDIATRICS The Hygienic and Medical Treatment of Children By Thomas Morgan Rotch M D Professor of Pediatrics Harvard University Fifth Edition Rearranged and Rewritten Illustrated Half Leather Pp 1060 Price, $2 25 per volume Philadelphia and London J B Lippincott Co, 1907

This work has been revised to bring it up to the standard required by recent advances in this department This has necessitated the rewriting of a considerable portion of the book and the careful revision of the other articles The book retains the practical as well as scientific character which rendered the previous editions so helpful to practitioners as well as to students The illustrations have been increased by a number of new photographs and radiographs and one new colored plate

A GUIDE TO DISEASES OF THE NOSE AND THROAT AND THEIR TREATMENT By C A Parker F R C S Surgeon to the Throat Hospital Golden Square London W With 255 Illustrations Cloth Pp 624 Price $5 00 net New York Longmans Green & Co 1906

This work is for students and practitioners who take courses at special hospitals for diseases of the throat and nose and is the outgrowth of the author's lectures at the Throat Hospital Section I is devoted to methods of examination of the upper respiratory tract local treatment, and the general principles governing operations in this region. Section II on complications of the upper respiratory tract in relation to general medicine, while Section III, nearly a third of the volume, is devoted to the nose The use of the Heryng lamp for transillumination of the antrum is illustrated with a colored plate On the subject of spurs and deviations of the septum the author gives an unbiased description of various operations, including several by American rhinologists Diseases of the throat and larynx are grouped in two large sections of the work, which concludes with an appendix on the notification and isolation of fibrinous rhinitis

EYE INJURIES AND THEIR TREATMENT By A. Maitland Ramsey, M D, Fellow of the Faculty of Physicians and Surgeons Glasgow Illustrated. Cloth Pp 210 Price, $6 00 New York The Macmillan Company, 1907

This book is based on the author's graduate course of lectures on this subject He very modestly suggests in his preface that the book is suitable particularly for the general practitioner who requires a pithy presentation of cases, whereas it is a work that any ophthalmologist may read with profit The main feature of the book is its purely clinical consideration of the various eye injuries with the appropriate treatment The stock formulas of the Glasgow Ophthalmic Institution are given in an appendix The book is very freely illustrated with colored plates and drawings and is printed in large type on heavy paper Dr Ramsey's large practical experience in the care of eye injuries makes his views invaluable and we heartily recommend his book

TEXT BOOK OF MATERIA MEDICA FOR NURSES Including Therapeutics and Toxicology By G P Paul, M D Attending Physician to Samaritan Hospital Troy N Y Cloth Pp 242 Price, $1 50 net Philadelphia W B Saunders Co 1907

Paul's materia medica for nurses is practical in that it deals chiefly with the indications and contraindications for the various drugs, and gives their doses Part IV, on the "Newer Medicinal Agents," as it deals with the new synthetics, the use of which is not clearly defined, might well have been omitted Part V, "Practical Therapeutics," deals with hydrotherapy, including baths, gastric lavage, enteroclysis and hypodermoclysis, hypodermic medication, antiseptics and disinfectants, disinfection, topical medication, including application of heat, stupes, poultices, cupping, counterirritation and rectal alimentation, antitoxins and serums

TEXT BOOK OF EMBRYOLOGY For Students of Medicine By John Clement Heisler M D Professor of Anatomy in the Medico Chirurgical College Philadelphia With 212 Illustrations Third Edition Thoroughly Revised Cloth Pp 432 Price $3 00 net. Philadelphia and London W B Saunders Co 1907

In order to be in consonance with existing views, the text of this work has been revised thoroughly and in many instances whole chapters have been rewritten, such as the sections dealing with the ovum, the spermatozoon, blastodermic vesicle, the vascular system, ductless glands, pancreas, kidney, spinal cord, spinal column and the musculature The text is concise and yet sufficiently full for a text book to be used by the student as well as by practitioners All the good features of the previous editions have been retained and many new ones added

A SYSTEM OF SURGICAL NURSING With an Appendix Containing Useful Formulas Emergency Drill Etc. by A. N McGregor M D F F P S G Cloth Pp 554 Price 9s net. Glasgow David Bryce & Son

A volume of more than 500 pages might be considered rather extensive for the elucidation of only one portion of the work of the nurse, but the book is well written easy to read, well arranged, and, despite the size, not diffuse It takes up systematically the qualifications of nurses, principles of surgical treatment sepsis, asepsis, etc, general considerations of disease and repair processes, instruction in the practical details of ward work, preparatory and postoperative treatment of patients and working instructions

ANATOMY FOR NURSES E R Bundy M D Member of the Medical Staff of the Woman's Hospital Philadelphia With a glossary and 101 illustrations 34 of which are colored Cloth Pp 252 Price $1 75 net Philadelphia P Blakiston's Son & Co., 1906

This work is written in simple language and is fairly well illustrated The chapter on foods and digestion seems slightly out of place in a text book on anatomy and is so brief and superficial that it might well have been omitted

Miscellany

Assay of Pepsin—Cowie and Dickson (*Pharm Jour*, Feb 23, 1907) worked out a new method of assay of pepsin which determines not simply its solvent power on albumin as in ordinary methods, but rather its actual peptonizing power, which they think is a better measure of its therapeutic efficiency The process depends on the depth of color given by the biuret produced by the peptone formed in four hours from a given weight of dry albumin by a definite amount of the pepsin to be tested The color is compared with a solution of potassium permanganate which corresponds in color with the biuret produced from a known weight of peptone A control experiment must be carried out with the pepsin and water without the addition of albumin. The difference between the number of cubic centimeters required to match the color produced in the two tests corresponds to the amount of peptone actually produced by the digestive action of the pepsin The method is recommended as giving results that are sufficiently near those obtained by standard methods to give a very good idea of the power of a pepsin. It can be carried out in a comparatively short time and requires no special apparatus The authors have tried the xanthoproteic reaction by boiling the proteid with nitric acid and then adding excess of ammonia, but found it impossible to measure the differences between the depths of color by any standard yellow solution At the meeting of the Pharmaceutical Society of Great Britain, at which this paper was read, Mr Dott expressed doubts as to whether or not the solvent power of pepsin as given by the ordinary methods of assay did not represent the therapeutic efficiency nearly enough for practical purposes Mr Cowie said that it would be advantageous if a uniform process of assay were adopted by the various nations As America supplies most of the pepsin used in Great Britain it is desirable, he said that the British process should be similar to that of the U S Pharmacopeia

An Injection Fluid for Preserving Cadavers—An excellent injection fluid for preserving cadavers can be made of equal parts of alcohol, glycerin and melted phenol (carbolic acid) crystals This fluid, the formula for which has been furnished us by Dr Burton D Myers, professor of anatomy in the Medical Department of the University of Indiana, is made as follows White crystalline phenol is preferred though the straw colored product will do just as well, but it is not much cheaper Should the black crude phenol be used blue injection fluid must be used for the arteries, as red lead would be decolorized White crystals do not seriously affect the color of the red lead The alcohol should be used in about 95 per cent solution All the used 95 per cent and 80 per cent alcohol from the histology and neurology laboratories may be saved, this should be filtered and mixed with enough unused 95 per cent alcohol for the injection fluid The phenol costs from 23 to 24 cents a pound, the glycerin from 16 to 17 cents a pound and the alcohol about 60 cents a gallon The fluid of this formula thus costs about $1 42 a gallon While this is, of course, more expensive than the arsenic and formalin compound, the advantages are well worth the difference in cost It does not harden and stiffen the tissues as does formalin, there is never any infection from a cut received in the dissecting room, and the tissues, even the finger tips, toes, nose, etc., do not dry out even after weeks of exposure When cadavers are brought in they are placed on a table and scrubbed, then, as there is no chance of decomposition, there is no odor except that of the phenol The odor of decaying flesh, so common in dissecting rooms, is entirely absent, and the worst hindrance to good work has been removed

A Medical Senator Pleads in Favor of Absinthe in France—Belgium has recently prohibited the manufacture and sale of absinthe in that country, and some cantons in Switzerland have likewise taken drastic measures against it still more recently The medical profession in France has long been striving to restrict the use of absinthe in France and the group of medical members of the houses of parliament has been agitating the question with renewed energy during the last few months. The treasury department is strongly against any measure tending to reduce the present income from the internal revenue, and the minister at the head of the department does not hesitate to proclaim openly his hostility to any measure that would create at once a deficit of $12,000,000 An article in the *Presse Méd*, page 137, remarks that more money is paid out annually to the hospitals, asylums and almshouses on behalf of the victims of absinthe than the entire revenue from this source amounts to The superintendent of the Ville Evrard asylum states that out of the average of 550 alcoholics annually in the institution, fully 90 per cent are victims of absinthe On the other hand, the representatives in parliament of a certain district where the manufacture of absinthe is the principal industry, are making a strong stand against its suppression The senator from this district is a physician, and he admits that cheap absinthe is a vile poison but proclaims that the absinthe made in his district is so pure and made of such delightful ingredients that high grade, expensive absinthe like this should not be regarded as injurious He says that the standard of health in his district is above the average and epilepsy is unknown, although every one drinks absinthe He pleads earnestly for the few thousands of his voters who live by absinthe forgetting the many more thousands who die by it every year—surely a very strange stand for a physician to take

Erroneous Ideas About Poisonous Reptiles.—Popular opinion attributes to nearly all reptiles more or less poisonous properties The more formidable or repulsive the reptile the more likely it is to be associated in the popular mind with the possession of venom In the case of the Gila monster, investigation has failed to bear out the preconceived notion of its dangerous character Although some evidence has been adduced of the occurrence of sickness and even death after the bite of this reptile, experiment has shown that its saliva is possessed of only very feeble toxic properties, and that it has neither poison glands nor fangs, so that it can not envenom a wound in the manner of the poisonous snakes Dr G Goodfellow, in the *Scientific American*, March 30, 1907, refutes the evidence recently adduced to show the poisonous character of wounds inflicted by this reptile, especially in two cases occurring in Arizona with the history of which he states he is entirely familiar The first patient died from acute alcoholic poisoning grafted on chronic alcoholism The second patient had a very sore finger which resulted apparently from the cauterization and not from the bite Dr Goodfellow has himself been bitten by the monster, but has seen no consequences different from those usual in case of a lacerated wound It is probable that some of these cases are aggravated by the unnecessary active local treatment and the injudicious dosing with alcoholic liquids If Dr Goodfellow's conclusions are correct, such wounds should be treated as ordinary lacerations no special constitutional treatment is required

Tapeworm from a Cat.—Pollak recently reported at a meeting of the local medical society in Vienna the case of a child of six months affected with tenia For about 4 months small greenish, gravish objects resembling cucumbers about 1x2 cm. in size had been observed in the stools, and the microscope revealed that they were links of the *Tenia cucumerina* common in cats and dogs The family had no cat or dog but it was remembered that three weeks before the first appearance of the links in the stools the child had been taken to visit a friend and had lain on a bed with the friend's cat There were no appreciable symptoms in the infant from the presence of the tenia This form of tenia passes through the cysticercus stage in dog fleas and dog lice Only 20 cases are on record of its invasion of man but in most of these severe symptoms were observed convulsions and intestinal disturbances In the affected animals it frequently induces diarrhea and fits or pseudo rabies

The Study of Dietetics.—The study of the association of foods in health as well as in disease is not only fa[illegible] but extremely profitable to all concerned [illegible] appetite may be induced to take the [illegible] the attending physician [illegible] competent diet which will appeal to the sense [illegible] point not to be overlooked—*Medical*

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every-day practice Contributions will be welcomed from our readers]

Dosage for Children

YOUNG'S METHOD

This is easily remembered and is a good rule for children over a year old It is Add 12 to the age and divide the age by the result. For example, for a child of 2

$$\frac{2}{2+12}=\frac{1}{7}$$

COWLING'S METHOD

According to this method the dose for a child is obtained by dividing the number of the following birthday by 24 For example, at 2 years $3-24=1/8$

CLARK'S METHOD

This rule, although accurate, is not very practical According to Clark, the proper dose is in proportion to the weight of the individual Assuming 150 pounds as the average weight for which the dose is 1, then the proper dose will be in the same proportion to 1 as the patient's weight to 150 Therefore, if the weight be divided by 150, the resulting fraction represents the proper part of 1 for the dose in that particular case. For example The proper dose for a baby of 10 pounds would be 1/15 $(10-150=1/15)$

Administration of Hypnotics in Tablets

The tablet as a form for the administration of medicines has many advantages since it combines exactness of dosage, convenience in handling and pleasantness in administration It is apt to be forgotten, however that all medicines can not be used in this form Very volatile drugs are manifestly excluded, and salts which irritate the stomach should not be administered in tablet form, unless the tablet is first crushed and dissolved Difficultly soluble drugs may escape absorption altogether, or their action be much delayed if given in tablet form The varying degree to which the compression is carried permits of marked variations in the readiness of disintegration and accounts for many variations in the action of the same remedy It is not an uncommon experience for tablets to be found unchanged in the feces When a drug is insoluble there is no occasion for administering it in tablet form unless for sake of convenience In such a case the patient should be instructed to crush the tablet to a powder before taking it.

W Kohn (*Medizinische Klinik*) calls attention to the disadvantages of the tablet in administration of hypnotics It is important for the success of a hypnotic that it be promptly absorbed, and this can best be secured by giving it in solution The difficult solubility of several of these remedies requires that special precautions be taken to secure solution If the medicine be taken into the stomach in a tablet it is apt to remain some time undissolved, and hence unabsorbed and inactive, even if a quantity of warm water be taken after it The remedy may be so gradually absorbed that its hypnotic effect may not appear, the preliminary stage of excitement only being reached The frequent experience that a remedy does not act until the next day or the succeeding night is probably due to imperfect solution of the drug

Another accident that may arise in consequence of the irregular absorption of medicines in tablet form is cumulative action Kohn believes that the unfavorable results noted by some observers in the use of hypnotics arise from the fact that an additional and perhaps increased dose was given before the first had been excreted although due time had been allowed to intervene between the doses Kohn has found by experience that the administration of a hypnotic in solution secures a quicker effect and as the medicine is all absorbed in a short time, the occurrence of a tired feeling on awakening is avoided. Another advantage is that the desired effect can be obtained with a smaller dose—four fifths as large an amount generally being sufficient.

Laxatives, Cathartics and Purgatives

The following formula for a laxative pill is recommended by Shoemaker

℞	Extracti rhei		
	Pulveris jalapæ comp, āā	gr xx	1|3
	Hydrargyri cum creta	gr xl	2|6
	Extracti belladonnæ fol	gr iv	|26

M Ft pilulæ No xx Sig One pill at bedtime

In acute nephritis Croftan recommends evacuating the bowel with castor oil or cascara sagrada From 2 to 8 grains (0 12 0 5) of the extract of cascara may safely be given or of the fluid extract from 10 to 15 minims (0 6 2) In this disease Croftan states that saline purgatives must be avoided, as most salts irritate the kidneys or are eliminated with difficulty by the kidneys when these organs are diseased. He asserts that calomel and all drastic purgatives should be used only as extreme measures in emergency cases

When a simple laxative is necessary the elixir of cascara sagrada (Elixir rhamni purshianæ, N F) is very efficient

℞	Fluidextracti rhamni purshianæ aromatici		
	Elixir aromatici, āā	f℥i	30|

M Sig One teaspoonful at bedtime

When a more powerful preparation is needed, the compound elixir of cascara (Elixir rhamni purshianæ compositum, N F), may be used.

℞	Fluidext rhamni purshianæ aromatici	f℥ii	8|
	Fluidextracti sennæ	m xlviii	3|
	Fluidextracti juglandis (N F)	f℥i	4|
	Elixir aromatici	f℥xii	48|

M Sig One teaspoonful at bedtime

The above prescriptions are useful in the constipation of pregnancy in which saline cathartics are seldom indicated. In these cases pills of belladonna, aloin and strychnin may also be used The National Formulary contains formulas for several such pills

℞	Aloini	gr 1/2	|03
	Resinæ podophylli	gr 1/8	|008
	Extracti belladonnæ fol	gr 1/4	|01

Ft. pilula Sig One such pill as often as necessary

℞	Aloini	gr 1/5	|012
	Strychninæ	gr 1/120	|00054
	Extracti belladonnæ fol	gr 1/8	|008

Ft pilula Sig One such pill at bedtime when necessary

℞	Aloini	gr 1/5	|012
	Strychninæ	gr 1/120	|00054
	Extracti belladonnæ fol	gr 1/8	|008
	Extracti rhamni purshianæ	gr 1/2	|03

Ft pilula Sig One such pill at bedtime when necessary

For children calomel and the syrup and tincture of rhubarb answer the purpose in most cases If castor oil is particularly indicated H B Sheffield, New York, recommends the following emulsion

℞	Olei ricini	f℥i	30|
	Olei menthæ piperitæ	m v	|3
	Sacchari	ʒi	4|
	Mucilaginis acaciæ		
	Aquæ āā, q s ad	f℥ii	60|

M et ft emulsum Sig From 2 to 4 teaspoonfuls at a dose, according to the age of the child

Sheffield states that Rochelle salts with a little aromatic spirits of ammonia glycerin and water constitute a pleasant mixture Podophyllin and aloin, he states, are best prescribed in suppositories of cacao butter This authority also says that it is well to remember that an enema often obviates the necessity for drugging

The following has been recommended in obstinate constipation

℞	Fluidextracti rhamni purshianæ	f℥i	30|
	Fluidextracti belladonnæ	f℥i	4|
	Tincturæ nucis vomicæ	f℥ii	8|
	Syrupi		
	Aquæ, āā, q s ad	f℥iv	120|

M Sig One teaspoonful thrice daily

The following pills have also been recommended

℞ Extracti colocynthidis comp	gr xii		78
Extracti belladonnæ fol	gr ii		13
Extracti gentianæ	gr vi		4
Olei cari	gtts iii		10

Ft pilulæ No vi. Sig One pill at bedtime

℞ Resinæ podophylli	gr ii	13
Quininæ sulphatis		
Extracti aloes, āā	gr viii	5
Fellis bovis	gr xvi	1 04

Ft pilulæ No vi Sig One or two pills at bedtime

Potter recommends the following castor oil emulsion for children

℞ Olei ricini		
Glycerini, āā	fʒi	30
Tincturæ aurantii	fʒii	8
Tincturæ senegæ	fʒi	4
Aquæ cinnamomi q s ad	fʒiv	120

M Ft emulsum Sig One or two tablespoonfuls for children, according to age For adults From two to four tablespoonfuls

Asthma in Infants and Children.

Cautley, in the *Clinical Journal*, London, states that the prophylactic treatment consists in bringing up predisposed children in the most suitable manner as regards hygiene, diet and prevention of catarrhal conditions The body should be kept warm and the apartments cool A high dry air (mountain region) is more suitable for these patients than the seaside When there is much catarrh, however, it is more important to choose a warm dry climate, or seaside air and sandy soil, with the object of benefiting the catarrh High altitudes are unsuitable for emphysema

The diet should be simple and nutritious and should consist of small regular meals, avoiding all meat extracts and excess of carbohydrates Fruit may be given liberally The bowels should be kept open

All local sources of irritation should be attended to, and adenoids or enlarged tonsils should be removed

During a paroxysm of spasmodic asthma a warm bed in a room with open windows may be all that is necessary in mild cases In more severe ones some of the following methods may be adopted In order to induce general vasodilation give a hot water or vapor bath, apply hot fomentations or turpentine stupes to the chest, administer nitroglycerin, nitrites, or inhalations of amyl nitrite, or give chloral by mouth or rectum, or give alcohol Constriction of the respiratory mucosa can be induced by inhalation of cold air from ice in a jug or inhaler, adrenalin, 1 in 1000, the fumes of brown paper, nitre paper, the leaves of stramonium, or belladonna or hyoscyamus

Most of these remedies are irritating, unsuitable and injurious in the catarrhal asthma of infants, in which more benefit is derived from the inhalation of terebene or creosote

An emetic is often useful at the onset of an attack, and for this purpose the syrup or the wine or powder of ipecacuanha can be given In older children unable to swallow, one tenth of a grain (0 006) of apomorphin may be given subcutaneously Emetics help the child to get rid of mucus and also act as cardiac depressants Other remedies which may be mentioned are belladonna by the mouth and atropin or pilocarpin subcutaneously, counter irritants to the chest dry cupping and occasionally bleeding Morphin administered subcutaneously, is useful in bad attacks, but should very rarely be employed for children

For the prevention of the nocturnal paroxysms antipyrin acetphenetidin (phenacetin) or bromids may be given at bedtime

Between the attacks treatment must be directed to the general health A course of potassium iodid or syrup of the iodid of iron and cod liver oil is advisable Arsenic is beneficial in cases in which there is a tendency to glandular enlargement while strychnin and cinchona form useful tonics Cauterization of the nose is another measure which may be tried in this condition

As a general principle it is infinitely more important to attend to the general health of the child, to prevent erroneous methods of feeding to remove local sources of irritation, and to cure the catarrhal tendency, than it is to rely on measures for relieving or cutting short the paroxysms

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Medicolegal

Towns Can Not Remove Members of Boards of Health.

The Supreme Judicial Court of Massachusetts, in the case of the Attorney General vs Stratton and others, a proceeding in the nature of quo warranto to require the respondents to show by what warrant and authority they exercised the office of members of the board of health of the town of Swampscott, holds that it could not be maintained It says whatever the rule may be in reference to municipal corporations in other parts of the country, it is of the opinion that, in the cities and towns of Massachusetts, there is no power to remove public officers except that which is given by the statutes In Massachusetts the election of public officers, their removal from office and the filling of vacancies have been the subject of elaborate legislation But there is no provision for the removal of members of the board of health in towns In the absence of any such provision the court is of the opinion that they can not be removed by a vote of the town, either with or without a hearing before the town or a committee thereof

Damage for Injury Causing Loss of Bowel Control.

The Court of Appeals of Kentucky says, on the appeal of Louisville Railway Company vs Bohon, a personal injury case brought by the latter party that the plaintiff testified that after she had been thrown to the ground while attempting to alight from a street car, she was confined to her bed about two weeks, that the physician visited her during this time quite frequently, that she was injured not only by a cut in her scalp, but that there was an injury to her spine, affecting the lower portion thereof, and that at the time of the trial—which was a year or more after the date of the injury—she was still suffering from the effects of the injury Her physician testified that he had visited her and prescribed for her at her home and at his office 50 or more times during the course of that year He further testified that the injury was such as to leave her in a most distressing and unfortunate condition that the injury to her back so affected the nerves of the back as to produce partial paralysis thereof, and caused her to lose control of her bowels, and that this trouble was traceable directly to the injury, that he had been her family physician for some seven years or more and that she had no other injury than the one occasioned by the fall from the car, so far as he knew that for some time after the injury the nerves controlling the bladder were also affected but that at the date of the trial she had in a measure recovered from this trouble but that she was still unable to control her bowels The trial resulted in a verdict of $3 000 for the plaintiff and the judgment therefor is affirmed As to whether this injury was permanent or not the court states that it can not say, but that even if it was not it is of the opinion that the damages awarded were not excessive

Proving Being Physician in Action for Services

The Supreme Court of Montana says that the case of Legat vs Gerrick was brought to recover a balance of $100 for professional services rendered for the defendant by the plaintiff a physician The physician obtained a judgment in the district court which is affirmed although it was urged that the evidence was insufficient to sustain the decision of the lower court in that there was not any evidence offered on behalf of the plaintiff to show that the plaintiff had a certificate granted by the state medical board of the state of Montana entitling him to practice med

If the fact affirmatively appeared [illegible] services were rendered the plaintiff [illegible] then the Supreme Court says the recover would be raised directly

appear, the only question presented here was On whom rested the burden of proof? Was the burden on the plaintiff in the first instance to show that he had such certificate, or was it on the defendant to show that he did not have it?

The testimony given at the trial on behalf of the plaintiff by a witness named Kremer was "I knew Dr Leggat at that time, and I can state that I knew him to be a physician and surgeon in the city of Butte, and at that time was the city physician" In view of this testimony, the Supreme Court thinks that the presumption followed that Dr Leggat had complied with the law, and that the burden of proof was on the defendant to show that he had not done so And, in the absence of any attempt on the part of the defendant to make this proof, the court thinks the evidence was sufficient to sustain the decision of the lower court

The Supreme Court says that after a careful review of the authorities the Court of Appeals of Illinois, in Williams vs People, 20 Ill App 92, said "Where the question of license or qualification of a physician arises collaterally in a civil action between party and party, or between the doctor and the one who employed him, then the license or due qualification under the statute to practice will be presumed McPherson vs Cheadell, 24 Wend. (N Y) 15, Thompson vs Sayre, 1 Denio (N Y) 175, Pearce vs Whale, 5 Barn & Cres 758" The reason for the rule is stated by the same court in the City of Chicago vs Wood, 24 Ill App 40, as follows "The reason why the license will be presumed where there is no evidence to the contrary, rests on the principle that, when an act is required by positive law, to be done, the omission of which would be a misdemeanor, the law presumes that it has been done, and therefore the party relying on the omission must make some proof of it though it be a negative"

While there is some conflict in the decisions, the decided weight of authority seems to be in favor of the rule stated above in Williams vs People McPherson vs Cheadell, 24 Wend. (N Y) 15, Jo Daviess County vs Staples, 108 Ill App 539, Lacy vs Kossuth County, 106 Iowa, 16, Dickerson vs Gordy, 5 Rob (La) 489, Lyford vs Martin, 79 Minn 243, Cather vs Damerell (Neb) 99 N W 35, Rider vs Ashland County, 87 Wis 160, Good vs Lasher, 99 Ill App 653

The same general rule is recognized by the Court of Appeals of Indiana in Cooper vs Griffin, 13 Ind App, 212, but, by reason of a special statute in that state, the contrary rule is upheld

A somewhat analogous question is presented in an action brought in a court of this state (Montana) by a foreign corporation It has been held that it is not necessary for the foreign corporation to prove, in the first instance, that it has complied with the laws of this state entitling it to do business here

Nor does the Supreme Court think that the trial court erred in allowing interest on the amount recovered, its action appearing to be warranted by section 4280 of the Civil Code of Montana, which provides "Every person who is entitled to recover damages certain, or capable of being made certain by calculation, and the right to recover which is vested in him on a particular day, is entitled also to recover interest thereon from that day, except during such time as the debtor is prevented by law, or by the act of the creditor, from paying the debt"—and by the construction given to that section by this court in Hefferlin vs Karlman, 29 Mont 139

Liability of Hospitals and Others for Negligence in Charity Cases—Case of Patient Paid for by County

The Supreme Court of Utah says that the case of Gitzhoffen vs Sisters of Holy Cross Hospital Association was brought to recover damages alleged to have been sustained by the plaintiff through the defendant's negligence while he was an inmate of its hospital The evidence on the part of the plaintiff tended to show that when he was admitted to the hospital he was suffering from gonorrheal conjunctivitis in the second, or purulent stage, and should have had his eyes cleansed every 20 minutes which was not done, in consequence of which total blindness resulted in the left eye, and the sight of the right eye was so impaired as to amount to substantial blindness The county paid the defendant for taking care of the plaintiff 41 days, $41

The great weight of authority is, the court says, that a charitable institution or corporation is not liable for the negligent acts of its nurses or other employés, if it has not been guilty of negligence in selecting them To a corporation organized for profit the doctrine of respondeat superior (the superior or master must answer) fully applies, and the corporation is made liable for the negligent acts of its employés done in the discharge of its business and within the scope of the servants' employment

In this case, however, it was in effect urged that, notwithstanding the general character of the defendant as to its being a corporation for gain, nevertheless the actual relation existing between it and the plaintiff was merely charitable, and hence the same principle of the law should be applied to the case as is applied to charitable institutions, only making it liable for its negligence in the selection of the nurse This position was taken from the assumed facts that the plaintiff was an indigent person, a charge on the county, and as such was placed by it in the hospital for treatment for which payment was made by the county, the plaintiff paying nothing and not agreeing to pay anything As stated by counsel for the defendant in his brief "There was no contract between plaintiff and the defendant The contract for his admission to the hospital was between the county, whose charge he was, and the defendant Under the contract between the county and the defendant, plaintiff, having been sent there, had a right to be in the hospital and to be treated as a patient"

If one, through mere kindness or charity, admits a sick or wounded person to his house to administer aid and comfort to him, and for such purpose selects a physician or servant to attend him, undoubtedly he ought not to be held, nor does the law hold him, liable for the negligence of the physician or servant, unless, as the authorities say, he has been guilty of negligence in the selection of the physician or servant And, had the defendant so received the plaintiff, and not otherwise, it could not be held liable in any greater degree

But, if one receives another into his house for the purpose of treating him, and assumes and undertakes to do so, though it may be done gratuitously, there is some force to the position that he should be held liable for the negligence of his servant in the discharge of the duties undertaken and assumed by him, on the principle of law that, if a person actually undertakes and enters on the execution of a particular work, it is his duty to use reasonable care in the manner of executing it, whether done by himself or through his servants Applying the principle, there is force to the argument that the defendant, having received the plaintiff into its hospital, and having assumed and undertaken to treat him, it thereby assumed the duty of using reasonable care in so doing But the court need not, and does not, rest the determination of the case on this principle

It was alleged in the complaint that the defendant received the plaintiff into its hospital for hire The defendant in its answer, while denying that it received the plaintiff under any direct contract or agreement with him, yet admitted that it received him for treatment under a contract with the county for which it was paid by the county The admission had the effect of precluding the defendant from making the claim that the plaintiff was received and treated by it through mere charity, for the court can not well see how the defendant could admit that it received the plaintiff for treatment under contract with the county for hire, and then claim that it received the patient gratuitously No claim was made that the payment received by it was not made or received as compensation, but only as a donation or contribution to the defendant determined by the ability of the patient or the county to give and not on the value or cost of services rendered

If the defendant agreed with the county to receive the plaintiff for treatment for a price which the county was willing to pay, and the defendant to accept, the court can not see what difference it made that the relation between the county and the plaintiff was charitable, any more than if an individual through mere kindness toward the plaintiff had contracted

with the defendant for his treatment and care While, therefore, the relation between the plaintiff and the county may be said to have been merely charitable, the relation between the defendant and the plaintiff nevertheless was not so That a contract may be entered into between two persons for the use and benefit of a third person, and that such third person may maintain an action thereon, although the promise or contract was made without his knowledge and without any consideration moving for him, is well settled in this jurisdiction

While it may be said that this was an action of tort, and not on contract, nevertheless, in such an action, a plaintiff seeking to recover for injuries sustained by him through the negligence of another must show that the latter committed a breach of some duty owing to the plaintiff or imposed for his benefit To show what that duty was, it was proper to aver and prove the relation existing between the parties As tending to show a duty owing from the defendant to the plaintiff, it was proper to aver and prove that the defendant had received him under contract for a consideration, and as tending to show what it was that the defendant had assumed and undertaken to do For, it may well be said that, if the defendant had received the plaintiff as a mere object of charity, then it owed him no duty, except perhaps the exercise of care in the selecting of a physician or nurse, if it had undertaken to do so If, on the other hand, it received him for treatment under a contract for pay, and undertook and assumed to treat him, then it owed a duty not only to exercise reasonable care in the selection of a nurse, if it had undertaken that duty, but also the duty to use reasonable care in the giving of the treatment and the doing of that which it had agreed and assumed to do If the defendant agreed with the county to receive and treat the plaintiff for pay, the court can not see on what principle it did not owe him the same duty in the premises as if it had directly made the agreement with the plaintiff to receive and treat him for pay

Neither by the pleadings nor the evidence was there presented a case of rendering services out of mere charity, but one of rendering services for pay by the defendant, a non charitable corporation, and hence it must be held liable for the negligent acts of its servants done in the scope of their employment.

On the alleged acts of negligence, the court thinks the evidence was sufficient to require the case to be submitted to the jury for their finding

As to the condition of the plaintiff's eyes at the time of his admission to the hospital, the yielding of the disease to treatment, the physician in charge of the plaintiff, the directions given by the physicians to the defendant and its nurses with respect to the treatment, and as to what transpired at the hospital, the evidence was conflicting The case ought to have been submitted to the jury, and the trial court erred in not submitting it

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

April 13

1 Treatment of Acute Cardiac Affections in Childhood A Baginsky Berlin
2 Local Thermotherapy W C Thompson New York
3 Aneurism of the Arch of the Aorta C L Peabody New York.
4 *Diagnosis of Early Pregnancy L J Ladinski New York
5 Symptomless Mastoiditis Followed by Meningitis and Death A B Bennett Washington D C.
6 *Prolapse of the Rectum J K. Hall Morganton N C
7 Aspiration in Otitis Media Acuta. I B Wood, Marshalltown Iowa
8 Arrested Mental Development H Richardson Baltimore

4 **Diagnosis of Early Pregnancy**—Ladinski claims that the diagnosis is made by the appearance of a spot of peculiar softness and elasticity just above the junction of the body and the cervix in the anterior wall of the uterus in the fifth or sixth week When the uterus is retroverted and retroflexed it appears in the posterior wall and at the sixth or seventh week of pregnancy In incomplete abortion or subinvolution this area of softness appears, but is much more doughy and less elastic With a hard fibroid in the upper portion of the uterus there is a similar spot, but the softness is only relative With a soft myoma in the center of the uterus the feeling is exactly that of pregnancy The sign must be sought by bimanual palpation Absence of this sign absolutely excludes uterine pregnancy The sign aids in making a positive diagnosis of extrauterine pregnancy by excluding uterine pregnancy Ladinski suggests that it is in all probability due to extreme vascularity of the uterine wall at the point where it is felt

6 **Prolapse of Rectum**—Hall reports a case of very large rectal prolapse, in which a successful operation was done by attaching the sigmoid flexure to the anterior abdominal wall on the left side The muscular bands of the colon were very strongly attached to the surface of the peritoneum near the abdominal incision so as to produce strong adhesions The patient was not allowed up for a month or more

Boston Medical and Surgical Journal

April 11

9 Biography of Michel Servetus the Discoverer of the Pulmonary Circulation. C G Cumston Boston
10 *Empyema and Abscess of the Lung as Sequels of Acute Suppurative Appendicitis. H Gage Worcester Mass
11 *Operative Treatment of Hemorrhoids T C Hill Boston
12 *Hemorrhoids and Their Treatment C S Gilman Boston
13 Studies in Psychopathology (Concluded) B Sidis Brookline Mass.

10 **Sequels of Suppurative Appendicitis**—Gage reports two cases in which suppuration in the thoracic cavity followed shortly after an attack of appendicitis The first patient, a man, 45 years old, presented all the signs and symptoms of effusion in the lower part of the right chest Four ounces of pus, dark brown in color and of distinctly fecal odor, were evacuated On further questioning it developed that three weeks previously the patient had manifested the characteristic symptoms of appendicitis The second patient was a child, 6 years old An appendiceal abscess was opened, the appendix removed and the wound drained There was no evidence of abdominal infection, and the patient progressed nicely until the third day, when he developed a right sided pneumonia In the course of a week both physical and constitutional signs disappeared and the child was sitting up in bed The temperature then returned, associated for the first time with abdominal pain and tenderness The boy died 31 days after the appearance of these symptoms At the necropsy there was found an abscess of the right lung, pus in both pleural cavities, and a general suppurative peritonitis, chiefly noticeable in the upper part of the abdomen The region about the cecum showed no evidence of fresh infection The stump of the appendix was thoroughly healed and not even injected In another case the left side of the thorax was involved primarily from the extension of an abscess in the subphrenic region on the left side The patient was operated on five days after the onset of the disease and a perforated gangrenous appendix was removed In three other cases of abscess of the lung no surgical interference was attempted, with the result that two patients recovered and one died

11 **Operative Treatment of Hemorrhoids**—Hill believes that the ligature operation should be chosen when local anesthetics are employed this is the form of anesthetic in which he prefers and uses whenever possible

12 **Id**—Gilman agrees with Hill with regard to the use of the ligature and local anesthetics

New York Medical Journal

April 13

14 *Lesions of the Middle Ear Due to Influenza G B[illegible] New York.
15 Occurrence of Atypical Phagocytic Cells in Circulating Blood M W Howler Boston
16 *Two New Dressings for Fractured Clavicle [illegible] New York
17 Unsuccessful Aneurismorrhaphy [illegible] J C Munro Boston
18 *Diagnostic and Prognostic Value of [illegible] the Neutrophilic Leucocytosis [illegible] Lobar Pneumonia D M Bergman New York
19 Renal Congestion and the Mechanism [illegible] Unaccompanied by [illegible] W C Mount [illegible]
20 Premature Det[illegible] Nichol[illegible]
21 Milk [illegible]

14 **Middle-Ear Lesions Due to Influenza**—Bacon believes that influenza plays a very important part in acute inflammation of the middle ear Mastoiditis is a most frequent complication, and next come septic thrombosis of the sigmoid sinus and primary phlebitis and thrombosis of the jugular bulb

16 **Fracture of Clavicle**—Bellamy describes a first aid and a permanent dressing for fractured clavicle which he has employed successfully in a large number of cases His description is accompanied by numerous illustrations, hence it is necessary to refer the reader to the original article.

18 **Clinical Value of Nuclear Enumeration.**—Kaplan found that the mononuclear neutrophile is capable of carrying more staphylococci than are the multinuclear forms, and that the four nuclear forms carry least of all

Lancet-Clinic, Cincinnati.
April 13

22 *Operation for Hypertrophy of Prostate B Lewis and C E Burford St Louis
23 Endonasal Surgery A B Thrasher, Cincinnati

22—See abstract in THE JOURNAL, Dec 1, 1906 page 1850

St Louis Medical Review
April 6

24 Case of Rigid Spine W W Graves St. Louis
25 Additions to Our Knowledge of the Chancre and Primary Stage of Syphilis. J Grindon, St. Louis.
26 Manifestations of Secondary Syphilis C D Scott St Louis
27 Marcelin Berthelot G D Hinrichs, St Louis

Journal of Medical Research, Boston
March

28 Preservation of Neutrality in Culture Media with Aid of Phosphates L J Henderson and H B Webster New Haven Conn
29 Elastic Tissue of Carcinomata G McConnell St Louis
30 *Absorption from the Peritoneal Cavity Parts VI and VII B H Buxton New York.
31 *Pathology of Brown Tail Moth Dermatitis E E Tyzzer, New Haven Conn
32 Trypanosomes of the Trumpeter Hornbill J E Dutton J L. Todd and E N Tobey England
33 *The Uricolytic Enzyme A E Austin Boston
34 *B Coli Communis*, The Presumptive Test and the Sewage Streptococci in Drinking Water D Rivas Philadelphia
35 Lesions of the Granule Layer of the Human Cerebellum E E Southard New Haven Conn
36 Occurrence of Oxidative Ferments in a Melanotic Tumor of the Liver C L Alsberg New Haven Conn
37 Fatty Tumor of Kidney Suggesting a Metamorphosis of Adrenal Cells into True Fat C B Keenan and E W Archibald Montreal Canada

30 **Absorption of Peritoneal Cavity**—Buxton's article may be summarized as follows Bacteria, when injected into the peritoneal cavity even in minute doses, reach the circulation in a few minutes by way of the lymphatics of the diaphragm If these results are applied to man, then the Fowler position is indicated to avoid a rush of bacteria toward the diaphragm, and flushing of the abdominal cavity is not indicated Rabbits frequently die from acute intoxication in about two hours after injection into the peritoneum of living typhoid bacilli May not, then asks Buxton many deaths from shock after operation for perforation accompanied with irrigation be due to a similar cause?

31 **Brown Tail Moth Dermatitis**—Tyzzer says that the lesions are produced by the penetration into the epidermis of peculiarly modified microscopic hairs the nettling hairs, which are sharply pointed and barbed The other hairs of both the caterpillar and the moth do not produce any dermatitis The nettling hairs, which from their shape are perfectly adapted for penetration possess in addition an irritating substance which is undoubtedly an important factor in the production of the dermatitis This substance may be destroyed by heating the nettling hairs at 115 C or it may be extracted from them by certain solvents such as dilute solutions of alkalies at room temperature or water heated to 60 C Nettling hairs inactivated by either of these measures produce no more than a slight redness when rubbed into the skin and probably act then merely as foreign bodies The dermatitis produced by the nettling hairs is of two types dependent on the number of these elements penetrating a given area The severe type is usually due to actual contact with caterpillars, the milder scattered rash is due to nettling hairs blown in the air and lodging on the skin or on the undergarments as they hang drying The pathologic process in the skin consists of necrosis of the epidermal cells around the nettling hairs, the formation of spaces or microscopic vesicles in the epidermis at the site of injury, and inflammatory changes about the vessels of the corium (See editorial comment, page 1436)

33 **Uricolytic Enzyme.**—The results of Austin's investigation may be summed up as follows All alkalies, even the weaker ones, at brood oven temperature split uric acid, an action which almost invariably increases as the temperature rises The destructive action of the alkali used for the solution of uric acid is not uniformly increased by the addition of organic extracts isolated by the method of Rosell, which is supposed to isolate an active enzyme if such exists Among the products of splitting by both the alkali alone and the alkali in conjunction with organ extracts, oxalic acid is rather uniformly found, urea and allantoin not at all It is very difficult to isolate an extract of organs which does not contain purin bases, which are readily converted to uric acid at brood oven temperature by xantho oxydase, thereby obscuring the results obtained by isolation of the remaining acid There is no evidence of the reversible action of uricolytic enzyme if such exists Unless some solvent other than an alkali is found for uric acid, it will be difficult to separate the destruction action of the alkali from that of any enzyme which may be present

American Journal of Urology, New York
March

38 Hematuria of Chronic Nephritis A. L. Chute Boston
39 *Patient with Renal Calculi Developing the Stone passing Habit. E L Elsner Rochester, N Y
40 Urethral Hemorrhage F C Valentine and T M Townsend New York.

39 **Stone Passing Habit.**—Elsner reports the case of a woman, aged about 30, who had what he called the stone passing habit She passed renal calculi for a period of two years During that time she had 405 attacks of colic and passed 518 stones, 415 of small size, 43 medium sized and 60 large sized stones Not included in the total of stones were 200 or 300 small pieces and a considerable amount of fine sand

Washington Medical Annals, Washington, D C
March

41 Diphtheria Croup and Allied Affections with Special Reference to Intubation W A Wells Washington
42 *Fractures of Shaft of Femur C S White Washington.
43 *Case of Extensive Injury of the Cornea R S Lamb, Washington
44 Treatment of Chronic Diseases of the Heart T Schott Nauheim Germany
45 *Phenol in Erysipelas B M. Randolph, Washington
46 Medical Inspection of Schools G H Heitmuller Washington
47 Case of Multiple Fibroids of the Uterus J W Bovée, Washington
48 Case of Ectopic Pregnancy D S Lamb Washington

42 **Fractures of Shaft of Femur**—White recommends wiring especially in cases of fracture in the upper third of the shaft and other fractures when perfect apposition is impossible and when union is delayed or vicious He is firmly convinced that the future treatment of this fracture will be largely operative

43 **Injury of Cornea**—As the result of the explosion of a pop bottle Lamb's patient sustained a very severe injury of the cornea The wound extended from above the sclerocorneal margin, including the ciliary body, across the center of the cornea nearly to the opposite sclerocorneal margin The anterior chamber was absent and the iris filled the wound from end to end Rest in bed, a pressure bandage and the instillation of eserin sulphate constituted the treatment employed The patient made an excellent recovery, his distant vision without glasses being 6/6

45 **Phenol in Erysipelas**—Randolph is convinced that in the application of pure carbolic acid, controlled by alcohol, used before secondary infection of the deeper tissues has occurred we have almost a specific for erysipelas He reports two cases in which this method of treatment was successful. In one of these cases the disease was communicated by a barber

Louisville Monthly Journal of Medicine and Surgery
March

49 *Cases of Tuberculosis Treated with Serum S W Holloway Louisville
50 Diagnosis and Treatment of Pulmonary Tuberculosis F M Walker Louisville

49 **Serum in Tuberculosis**—Holloway believes in the efficacy of the serum treatment of tuberculosis and reports 15 cases to illustrate the benefits he has derived from its use In the early cases the best results were obtained, the next, in cases somewhat advanced, but not infected Cases of mixed infection were apparently made worse, and the far advanced cases showed no reaction but progressed as under other methods of treatment Medicinal treatment was eliminated as far as possible, and no fixed diet was insisted on In every case the diagnosis was confirmed microscopically

Journal of Cutaneous Diseases, New York.

March

51 *Syphilitic Alopecia H G Klotz New York
52 *Phagedenic and Serpiginous Ulcers and Infective Granulomata. W T Breakey Ann Arbor Mich.

51 **Syphilitic Alopecia**—Klotz is of the opinion that alopecia is not a common or regular symptom of the early stages of syphilis, although a certain number of cases may be accompanied by a diffuse loss of hair, varying in degree, similar to that observed after other infectious diseases There is however, a form of alopecia that occurs almost exclusively in syphilitics, and it is so characteristic as to be diagnostic of syphilis, either acquired or hereditary It occurs in the form of ill defined, irregular, small, sometimes coalescent patches of baldness distributed principally over the back and uppper portions of the scalp and giving it a mangy or moth eaten appearance It generally follows a very tedious course, although terminating in restoration of the hair

52 **Phagedenic and Serpiginous Ulcers**—Breakey reports a case of this kind which is unique mainly because of its duration The diagnosis was somewhat uncertain because the lesions resembled the ulcerating granulomata The ulcer was situated across the posterior side of the right thigh

New Orleans Medical and Surgical Journal

March

53 *Operative Surgery of Spine and Cord W S Bickham New Orleans
54 Successes and Failures in Intubation H Dupuy, New Orleans
55 Case of Dermatobia Noxialis J B Elliott Jr New Orleans

53 **Operative Surgery of Spine and Cord.**—Bickham pleads for greater ability on the part of the surgeon to diagnose his own neurologic cases, which involves a broader knowledge of physiologic, pathologic and clinical phenomena of nerve functions and nerve conditions He says that in the absence of such ability and in the present status of limited knowledge of the cord in health and disease and considering the equivocation of many clinical phenomena, in many cases, the only possibility of ascertaining the condition of the cord and, consequently of giving a patient the best chance for recovery is by exposing the cord, seeing and palpating it He also pleads for the freer application of surgical measures to a large variety of spinal lesions, at the same time laying stress on the need of more prompt surgical and sufficiently radical action in those cases in which surgical action is called for at all He urges the substitution of the osteoplastic method of resection in exposing the spinal cord and canal for the older form of exposure by laminectomy

Northwest Medicine, Seattle, Wash.

February

56 *Plea for a Better Knowledge of Materia Medica L R Markley Bellingham Wash
57 Conservative Midwifery C E Fell North Yakima Wash
58 *Cataracts Produced by Shocks from the Commercial Electric Current H Stillson Seattle

March

59 *Treatment of Acute Septic Peritonitis P W Willis Seattle
60 Syphilis J S Smith Bellingham Wash
61 Treatment of Patients and Methods of Sterilization at St Mary's Hospital Rochester Minn S C Cay Selma Ala
62 Present Status of Orthopedic Surgery R J James Seattle
63 *Gonorrheal Peritonitis in the Male J W Thomas Seattle

56 **Plea for Better Knowledge of Materia Medica**—Markley urges that physicians post themselves better than they do with regard to the physiologic action of drugs After a thorough knowledge of diagnosis it is essential to know what medicines are indicated in a given case Markley says that medical colleges should devote more time to the teaching of materia medica and therapeutics

58 **Cataract Produced by Electricity**—Stillson reports three cases of opacities in the crystalline lens which were caused by electricity and which closely resemble cataracts caused by lightning In the first case there is a complete loss of vision, and the only abnormality in the eyes is a cloudiness of the anterior portion of each lens the cloud resembling small dust particles just under the anterior capsule In the second case numerous spots appear in the anterior surface of the lens just under the capsule and composed of dots and interlacing lines The fundus was normal and vision equaled 8/10 The third case was similar to the second The current causing these lesions was an alternating one of 20 000 and 30 000 volts

59 **Treatment of Acute Septic Peritonitis**—Willis outlines his treatment as follows In the majority of cases the cause should be removed by operative interference, which should cause as little traumatism as possible to the peritoneum, saline flushing should be practiced and adequate drainage provided Firm dressings should be applied to give rest to the bowels Nothing should be given by mouth except water Gastric lavage should be used as often as necessary, even once an hour Saline solution should be given by rectum and, if necessary, subcutaneously If necessary, nutritive enemata should be given Exceptions to the operative portion of the treatment are cases which are too far advanced, thus requiring precisely the same treatment without operation, and some cases which develop from the pelvic organs of the female The points which Willis emphasizes are the absolute necessity of avoidance of all kinds of nourishment by mouth, and the frequent use of gastric lavage

63 **Gonorrheal Peritonitis in Male.**—Thomas reports two cases of gonorrheal peritonitis occurring in the male In one case it is assumed that the infection came from the seminal vesicles The second patient denied all possibility of gonorrheal infection

The Laryngoscope, St Louis

February

64 *New Method of Operating on Turbinal Hypertrophies S Yankauer New York
65 *External or Internal Operation for Suppuration of Accessory Nasal Sinuses M Halle Berlin Germany
66 *Pharyngo mycosis or Pharyngo keratosis I J Quinlan New York
67 Vocal Nodules H H Curtis New York
68 *Case of Fibrous Atresia of Nares J H Abraham New York
69 Complete Removal of Diseased Tonsils I Morawecck and G C Hall Louisville
70 Reverse Antrum Bone Forceps in Antrum Surgery I Ostrom Rock Island Ill

64 **Turbinectomy**—Yankauer describes a new method of operating for hypertrophy of the turbinates The operation consists of two stages 1 The excision of the hypertrophied tissue, 2 the suture of the wound The latter is the essential feature of the operation and in order to carry it out successfully special instruments are required These and the steps of the operation are described in detail The procedure has been employed successfully in 14 cases of hypertrophy of the inferior turbinate

65 **Suppuration of Accessory Nasal Sinuses**—Halle summarizes his paper as follows 1 In every case of accessory sinus empyema physiologic breathing is first of all to be established 2 In every case a cure should be attempted by establishing a blood drainage opening into the nose 3 In a large number of cases perhaps in most cases the frontal sinus also can be opened from within easily and without danger if the proposed method be followed 4 The external operation is to be resorted to when the discharge is continuously profuse or of long duration also when life is in danger 5 The after treatment in such cases is to be conducted from within unless the complete obliteration of the cavity by means of granulation is to be effected

66 **Pharyngo mycosis**—Quinlan reviews the clinical history of this condition the etiology of which is not definitely established

68 **Fibrous Atresia of Nares**—In the case reported by Abraham a fibrous circular web was situated at the [illegible] of the mucocutaneous surface of the [illegible]

opening was situated near the center of the web, and through this the patient attempted to breathe The web was removed under local anesthesia A trauma, with a baseball bat, was the cause of the condition

Ophthalmic Record, Chicago
March

71 *Severe Vertigo from Eyestrain. L S Dixon Boston
72 A New Schematic Eye. W A. Fisher Chicago
73 *Case of Self enucleation of Eyeball G L Noyes Columbia, Mo
74 Filtration of Eye and Pathogenesis of Glaucoma A. U Troncoso Mexico
75 *Accurate Diagnosis of Conjunctivitis. J Clothier, Philadelphia
76 Ocular Rotations G C Savage Nashville, Tenn.
77 Case of Chronic Pseudomembranous Conjunctivitis with Development of Ocular and Pharyngeal Diphtheria on Use of Jequirity H Harlan, Baltimore
78 A Capsulotome. R Denig, New York.
79 *Case of Primary Gumma of Sclera C D Jones Boston
80 Differential Diagnosis Between Headaches of Ocular and Nasal Origin M. Black Denver

71 **Severe Vertigo from Eyestrain**—Dixon reports two cases of vertigo in which relief was given by the wearing of glasses

73 **Self Enucleation of Eyeball**—Noyes reports the case of an insane woman, 65 years old, who forced her finger back into the socket of the eye and deliberately pulled the organ out About 3 cm of the optic nerve were attached to the eye The woman attempted to enucleate the other eye, but only succeeded in causing blindness It seems that the removal of the eye was prompted by an irresistible impulse, its origin being an hallucination of hearing The patient was very religious and thought she heard a voice say "If thine eye offend thee, pluck it out"

75 **Diagnosis of Conjunctivitis**—Clothier emphasizes the importance of a careful bacteriologic examination of the ocular secretions when attempting to make an accurate diagnosis of conjunctivitis

79 **Primary Gumma of Sclera.**—The patient whose case is reported by Jones was 36 years of age Occupying a position about 3 or 4 mm above the cornea was a diffuse, slightly nodulated swelling very red and inflamed, in the center of which was a bright yellow spot. It was underneath the conjunctiva, and apparently located in the sclera From the course of the disease and its reaction to specific treatment Jones considered it a case of primary gumma of the sclera

Pennsylvania Medical Journal, Athens
March

81 *Treatment of Hemorrhage Occurring Within the Thorax and Abdomen O C Gaub Pittsburg Pa
82 *Symptomatology and Diagnosis of Lobar Pneumonia. J I. Johnston Pittsburg Pa.
83 Complications of Lobar Pneumonia with Reference to Surgical Interference. P Y Eisenberg Norristown Pa.
84 *Treatment of Acute Lobar Pneumonia J M. Anders, Philadelphia
85 *Vaccination and Antivaccination B Lee Harrisburg Pa

81—See abstract in The Journal, Oct 13, 1906, page 1221

82 **Pneumonia**—Johnston details the results of an analysis of 100 cases of pneumonia, made for the purpose of determining the frequency of the so called classical symptoms and signs In this series there were 16 cases of apical pneumonia Crises occurred in 72 cases from the fifth to the eleventh day, 31 per cent of these occurring on the ninth day Twenty four of the patients died Herpes was noted in many of the cases In 87 per cent of the cases there was pain over the area of lung involved, abdominal pain was present in 2 per cent., pain on both sides in 1 per cent, pain in the back and legs in 3 per cent, and in 7 per cent no history was obtained In 53 per cent the temperature was 103 F or higher, while in 29 per cent it was 102 plus In 39 per cent the pulse rate was 120 or more, while 17 per cent had a pulse rate of not less than 110 Cough was present in all the cases The character of the sputum was not noted in all the cases, but it was characteristic in 37 in which record was made

84 **Treatment of Pneumonia.**—Anders emphasizes the value of hygienic measures and plenty of fresh air in the treatment of pneumonia Strychnin, whisky and digitalis are recommended in suitable cases and the application of cold compresses to the chest and the reduction of temperature by cold sponging are discussed favorably

85 **Vaccination and Antivaccination.**—Lee discusses the statistical government reports of Russia and Germany with reference to the efficacy of compulsory vaccination in the prevention of smallpox. The records are very much in favor of the methods employed in Germany, where vaccination is compulsory

Medical Fortnightly, St Louis
March 25

86 *Diet in Gastric Disorders. G H Hoxie Kansas City, Mo
87 *Treatment of Conjunctivitis Trachomatosa Relative to Sequelæ F P Parker, St Louis
88 Spinal Irritation. W T Marrs, Peoria Heights, Ill

86 **Diet in Gastric Disorders**—Hoxie emphasizes the value of dietetic treatment in gastric disorders and suggests that every practitioner have ready at his disposal a few dietaries which every household can follow out He says that a great deal may be accomplished by having patients suffering from gastric exhaustion rest for from one half hour to an hour after each meal, especially, if such rest be taken in the open air and sunlight The electric tub bath, with a sinusoidal current, given when the stomach is empty, acts as a stimulant, and cold douches applied to the spine early in the day and deep massage of the abdomen late in the afternoon are procedures which Hoxie has found useful

87 **Trachoma**—Parker urges early operation in trachoma He says that if there were more operative treatment combined with local applications in the treatment of trachoma it would shorten the duration of the disease and at the same time lessen the hypertrophy of the conjunctiva, thereby minimizing the danger of complications

Archives of Pediatrics, New York.
March

89 *Anemia Infantum Pseudoleukemica H Koplik, New York.
90 *Modified Wet Nursing T S Westcott Philadelphia.
91 *Typhoid Infection Conveyed by Convalescent Infant. T S Southworth New York.
92 *Hypertrophic Stenosis of Pylorus in Infant. R B Kimball and F Hartley New York

89 **Anemia Infantum Pseudoleukemica.**—Koplik presents a very detailed report of nine cases of this affection, occurring in children ranging in age from 11 to 20 months Three of the patients died and three improved under treatment The lowest hemoglobin record was 25 per cent, the highest 65 per cent. In the latter case the leucocytes numbered 96,000, the highest count in any of the nine cases Careful differential counts were made, as may be seen by consulting the original report.

90 **Modified Wet Nursing**—In the plan of feeding proposed by Westcott the human milk serves simply as one ingredient of the bottle mixture The average yield for the day is apportioned in fairly equal amounts for each feeding, and the total quantity of the bottle is made up according to the needs of the individual case He has found this method a most helpful aid in convalescence from summer diarrheas in very young infants The object of this plan of feeding is to secure a food which can be appropriated at once by the starving organism of the infant, and then to continue this until, by gradual increase, the artificial ingredients of the bottle can be fitted to the increasing demands of the infant, so that the human milk can be dispensed with altogether and the thriving infant allowed to proceed on a satisfactory artificial food

91 **Typhoid.**—Southworth presents the histories of two house epidemics of typhoid fever in different cities, the connecting link between which was an infant 16 months of age, who, preceded and followed by definite cases of typhoid in his own family, passed through an illness with prolonged but relatively moderate temperature, with gastrointestinal symptoms and a complicating pneumonia, without positive Widal at the time, but after some weeks giving a positive reaction The infant after a normal temperature for about two weeks, during part of which he was under observation in a hospital, then entered another family and house in which there had been no typhoid, and during his stay there had been only one acute indisposition of a few days' duration, with temperature falling to the normal in two days under local treatment of an edematous and excoriated prepuce Three weeks after his arrival there two children came down with typhoid, and two weeks

later a third child Painstaking inquiry revealed no other source of infection The evidence seemed to point strongly to the infant as the carrier of infection after his convalescence

92 **Hypertrophic Stenosis of Pylorus**—Kimball and Hartley report a case of hypertrophic stenosis of the pylorus, which was treated dietetically for about three weeks, when it became necessary to do a posterior gastrojejunostomy, from which the patient made an uneventful recovery

Fort Wayne Journal Magazine
March

93 European Clinics and Clinicians C E. Barnett Fort Wayne.
94 Cases of Cholelithiasis. B Van Sweringen Fort Wayne.
95 Adjustment of Glasses by the Physician. A. E Bulson, Jr Fort Wayne

Southern California Practitioner, Los Angeles.
March

96 History and Etiology of Pulmonary Tuberculosis H Herbert, Los Angeles
97 Pathology of Pulmonary Tuberculosis S P Black Los Angeles
98 Medical Tuberculosis in Children J C King Banning Cal
99 Symptomatology of Pulmonary Tuberculosis N Bridge Los Angeles
100 Physical Signs of Pulmonary Tuberculosis. W J Barlow, Los Angeles
101 Complications of Pulmonary Tuberculosis. G L. Cole Los Angeles
102 Prognosis of Pulmonary Tuberculosis C C Browning, Monrovia Cal
103 Dietetic Treatment of Pulmonary Tuberculosis G H Kress Los Angeles.
104 Medicinal and Other Treatment of Pulmonary Tuberculosis F M. Pottenger Monrovia, Cal
105 Progress in Medicine in 1906 D J Frick Los Angeles
106 Progress in Surgery in 1906 E H Wiley Los Angeles
107 Progress in Obstetrics in 1906 E M Lazard Los Angeles
108 Progress in Pediatrics in 1906 P A. Adams Los Angeles

Detroit Medical Journal.
March

109 Tuberculosis in Michigan To day F W Shumway Lansing Mich
110 Home Treatment of Tuberculosis B R Shurly Detroit
111 Résumé of Accomplishments of the Michigan State Medical Board During 1906 B D Harrison Detroit

Columbus Medical Journal
March

112 Present Status of Surgery H P Pomerene Canton, Ohio
113 Present Status of Reciprocity Relations Between Ohio and Other States A. Ravogli Cincinnati
114 At What Point in the Curriculum Should a Student Begin to Attend Clinics M J Lichty Cleveland.
115 Kentucky Schools and Their Relation to the Ohio Board R L Thomas Cincinnati

Philippine Journal of Science, Manila
December 1906

116 Physiologically Active Constituents of Certain Philippine Medicinal Plants R. F Bacon Manila
117 Toxic Action of Saponins R F Bacon and H T Marshall Manila
118 Physiography of the Philippine Islands W D Smith
119 Agenesis of the Vermiform Appendix H T Marshall and R T Edwards Manila.
120 Problems in Economic Entomology in the Philippines C S Banks Manila
121 Philippine Fibers and Fibrous Substances Their Suitability for Paper Making (Part II) G F Richmond Manila

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FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest

British Medical Journal, London
March 30

1 *Diagnosis of Certain Forms of Kidney Disease J R Bradford
2 *Albuminuric Retinitis W H Jessop
3 *Treatment of Syphilis G Pernet
4 *Bacteriologic Diagnosis of Cholera. M. A. Ruffer
5 *Insanity, Its Causes and Increase G H Savage
6 Recurrent Torsion of Spermatic Cord. W G Nash
7 *Lupus Vulgaris of Long Duration Iodoform Injections Rapid Recovery T W Dewar
8 Treatment of Scabies by Balsam of Peru F J W Porter
9 Spirillosis and Hematozoal Disease of Domestic Fowls in the Anglo Egyptian Soudan A Balfour

1 **Kidney Disease**—Bradford discusses the diagnosis of certain forms of renal disease, particularly functional albuminuria and nephritis, and also reviews the principles of treatment of Bright's disease He lays great stress on the importance of never diagnosing the presence of serious renal disease merely on the strength of a urinary examination He says t this should always be controlled by a clinical examination the patient, with special reference to the state of the cardiovascular system and the general nutrition

2 **Albuminuric Retinitis.**—Jessop describes three cases of typical albuminuric retinitis occurring in a case of parenchymatous nephritis, in one of chronic interstitial nephritis and in one of acute nephritis in pregnancy

3 **Treatment of Syphilis**—The general treatment of syphilis, as usually carried out, is reviewed by Pernet, and special reference is made to intramuscular injections of mercurial preparations

4 **Bacteriologic Diagnosis of Cholera**—As the result of careful experimentation, Ruffer is of the opinion that it is not advisable to trust to the agglutination test only in the bacteriologic diagnosis of cholera The test is said to be useful but not specific

5 **Insanity**—In this, his third lecture, Savage discusses alcoholism and influenza as causes of insanity the sexual causes, and the question of an increase in the number of the insane

7 **Lupus Vulgaris**—In the case reported by Dewar, the disease had existed for about fourteen years resisting treatment by cauterization and inunction and radiotherapy The lesions were situated on the left side of the nose over the left malar bone, on the lobe and helix of the right ear, and at the angle of the jaw on the right side A test injection of tuberculin was followed by a rather violent reaction The treatment adopted by Dewar was about as follows

After washing off the scabs with hot water, the lesions were dried, and thin pieces of cotton wool soaked in a 5 per cent solution of cocain, were applied to the ulcers for a few minutes On removing these, thin films of cotton wool, soaked in a ten volume solution of peroxid of hydrogen were left on and kept in position by touching the edges with collodion Every second day the patient was given an intravenous injection of 15 minims of an ethereal solution of iodoform plus liquid paraffin Within forty days the patient was cured completely

The Lancet, London
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10 *Increase in Insanity G H Savage
11 Relations of Laryngology and Rhinology to General Practice F Semon
12 *Acute Infective or Toxic Conditions of the Nervous System E F Buzzard
13 *Treatment of Acute Failure of the Heart. C Bolton
14 *Cerebrospinal Fever N Raw
15 *Cases of Puerperal Septicemia A K Gordon
16 Chloretone and Its Uses Especially in Chorea W F Wynter
17 *Pulmonary Hypertrophic Osteoarthropathy Occurring in Case of Congenital Heart Disease H B Shaw and R H Cooper
18 Twin Ovum in a Tubal Pregnancy A I Rutherford
19 Suppurating Hydatid of Gall Bladder A C L Reade
20 Case of Dupuytren's Contraction Successfully Treated with Fibrolysin W D Lawrie

10—See abstract No 5 in this issue of THE JOURNAL

12 **Acute Infective or Toxic Conditions of Nervous System**—In this paper Buzzard discusses acute ascending myelitis, Landry's paralysis and acute toxic polyneuritis

13 **Treatment of Acute Heart Failure**—Nothing new is presented by Bolton with reference to the treatment of acute heart failure He reviews the causes for the occurrence of such a failure and outlines the treatment that is usually adopted

14 **Cerebrospinal Fever**—Raw reports two cases which illustrate the impossibility of making an accurate diagnosis between cerebrospinal and acute tuberculous meningitis especially in time of epidemic when attention is turned in that direction

15 **Puerperal Septicemia**—In 40 cases of puerperal fever, reported by Gordon, there occurred 12 fatalities 4 of these shortly after the patients reached the hospital The routine treatment of these cases consisted in curettage and vigorous disinfection of the uterus Antistreptococcic serum was given to 20 patients the dose ranging from 0 to 200 c c the usual amount injected was 100 c c Three of the patients died Gordon believes that the proper treatment is thorough local disinfection and that [illegible] drugs are occasionally [illegible]ful [illegible] [illegible]

[illegible] by—I

systolic murmur was heard over the precordium, probably due to a defect of the interventricular septum A radioscopic examination was made and showed considerable enlargement of the bones of the legs, hands, feet and both forearms

Journal of Tropical Medicine and Hygiene, London

March 15

21 Measures Against Mosquitoes in Port Said and Their Results E H Ross
22 Outbreak of Hemorrhagic Septicemia at Pokfulam, Hong Kong J M Atkinson
23 Epidemiologic Aspects of Small Outbreak of Beriberi A. C Ingram

Journal of Obstetrics and Gynecology of the British Empire, London

March

24 Ovogenesis and the Formation of Interstitial Cells of the Ovary J E Lane-Claypon
25 *Possibilities of Ovarian Grafting in the Human Subject. E S Carmichael
26 *Mechanical Dilatation of the Cervix Uteri in Obstetrics J C H Leicester
27 *Prognosis of Pregnancy in Patients with One Kidney J H Ferguson
28 Radical Abdominal Operation for Uterine Cancer E T Thring
29 Case of Villous Tumor of the Uterus in Woman Aged 84 J Bland Sutton
30 Complete Inversion of the Uterus Following Delivery W Tate.
31 Rupture of Vaginal Wall with Protrusion of Small Intestine in Woman aged 63 A N McGregor
32 Case of Patent Urachus Over One Inch in Diameter Forming a Tubular Prolongation of Bladder G B Marshall

25 **Ovarian Grafting**—Carmichael has looked into the value of ovarian grafting from the surgical standpoint He found that in the rabbit the whole ovary may be transplanted with success, but in the majority of cases, about 80 per cent, there was partial degeneration of the ovary The ovary also may undergo either a fibrous or a cystic degeneration The germinal epithelium persists in a small percentage of cases The Graafian follicles and ova persist and mature some months after grafting, but ultimately tend to become cystic From these observations Carmichael concludes that it is unlikely that the whole human ovary can be grafted with success, but that partial grafting is more likely to succeed, the grafting of the cortical portions of the ovary more especially Furthermore, part of the ovary may ovulate and preserve its function of internal secretion

26 **Mechanical Dilatation of Cervix Uteri.**—Leicester reports 16 cases in which he made use of some form of mechanical dilatation of the cervix in order to effect delivery In none of these cases was there any untoward effect which could be attributed to the method of dilatation The instrument used in the first six cases was Bossi's model, in the remainder, Preiss's modification of the Bossi instrument In 7 cases dilatation was resorted to for eclampsia, in 6 for rigid cervix, and in 1 each for induction of labor placenta prævia and hydatid mole Leicester is of the opinion that these dilators have a distinct place in obstetric practice, but that the number of cases in which their use is indicated is limited

27 **Pregnancy in Women with One Kidney**—The case reported by Ferguson shows that in a patient whose remaining kidney is healthy and has had time to become sufficiently hypertrophied to perform the work of two the strain of pregnancy can be borne fairly well The patient had, on the whole, less severe albuminuria and less toxic disturbance than many albuminuric primigravidæ, both of whose kidneys are known to be organically sound

Semaine Médicale, Paris

33 (XXVII No 12 pp 133 144) Mechanism and Pathogenesis of Hernia of the Cecum (Hernies du cæcum) P Cavaillon and R Leriche
34 (No 13 pp 145-156) *Neuronophagy (Ce qu'il faut en tendre par neuronophagie) C Marinesco
35 Persistence of Hymen Not an Absolute Sign of Virginity (L'état de virginité apparente d'une femme mariée n'est pas, comme la admis un tribunal français une preuve absolue de l'abstention de tout rapport conjugal)

34 **Neuronophagy**—Marinesco reviews what has been written on the destruction of nerve cells by phagocytosis His conclusions are that neuronophagy actually does occur but only when the nerve cells have become degenerated or disintegrated from any cause Experiments with cauterization of brain tissue injection of lycopodium powder and transplantation of ganglion cells have convinced him that so long as the nerve cells remain intact they are respected by the phagocytes, but that dead cells are soon incorporated by the phagocytes He suggests "necrophagy" as a more appropriate term than "neuronophagy"

Archiv f klinische Chirurgie, Langenbeck's, Berlin.

Last indexed page 1384

36 (LXXXI Part 1 pp 1 786) *Bone Tumors in Skull. (Tumoren des Schädeldaches) von Eiselsberg
37 *Subdural Hematoma (Subdurale Hämatome) Kröniein
38 Removal of Malignant Glioma of Brain (Gliom des Grosshirns) Id
39 *Operations in Posterior Cranial Fossa (Hintere Schädelgrube) F Krause
40 Primary Epitheliomata of Vascular Plexus of Brain (Epithelgeschwülste der Adergeflechte des Gehirns) M Bielschowsky and E Unger
41 *Perforation of Gastric Ulcer (Magengeschwürs Perforation) Brentano Id W Körte
42 *Peritonitis in Little Girls, Due to Acute Salpingitis (Peritonitis der kleinen Mädchen) Riedel
43 Elephantiasis After Extirpation of Inguinal Glands (Lymphdrüsenexstirpation und Eleph) Id
44 *Anatomy and Surgery of the Splenic Flexure of Colon (Flexura coli sinistra) O Madelung
45 *Kidney Operations (Nierenchirurgie) H Gebele.
46 *Early Diagnosis and Operation for Tuberculosis of Kidney and Bladder (Nieren und Blasentub) H Kümmell
47 *Treatment of Cancer of the Tongue and Ligature of External Carotid. (Zungenkrebs) Küster
48 Treatment of Wounds of Vessels During Campaign of 1905-6 (Gefässverletzungen) Zoege von Manteuffel
49 Historical Sketch of Extirpation of Aneurisms (Exstirpatio aneurysmatis) A. Köhler
50 Removal of Tumors in Wall of Chest with Wide Opening of the Pleura (Brustwandgeschwülste.) L. Rehn
51 *Spinal Anesthesia (Lumbalanästhesie) H Heineke and A Laewen
52 *Causes of Serous Effusions in Joints and Their Treatment (Gelenkhydrops) O Hildebrand
53 Congenital Coxa Vara from Defective Development of Cartilage (Coxa vara adnata chondrodystrophica) B Bosse
54 Results of Tendon Transplantation (Sehnenplastiken) A Hoffa
55 Osteomyelitis of Pelvis (Beckenosteomyelitis) A. v Bergmann
56 Differences in Resisting Power of Various Tissues and Cavities (Exp Untersuchung über die Infection und Bacterienresorption der Gelenke des Subduralraumes, etc.) W Noetzel
57 Abdominal Fetal Inclusions (Foetus in foetu) F Rosenbach
58 Traumatic Rupture of Hepatic Duct. (Ruptus hepaticus) Hildebrandt
59 Remote Results of 100 Operations on the Biliary Passages (Op an den Gallenwegen) T Kocher and H Matti
60 Hitherto Unpublished Latin Translation of Arabian Work on Medicine and Surgery by Ali Abbas A D 994 (Lateinische Version der Chirurgie der Pantegni) J Pagel

36 **Bone Tumors in the Skull**—Three cases of large bony growths in the frontal bone are described in which operative intervention gave comparatively good results In the two severer cases the operation was rendered difficult by the danger of involvement of the meninges in an otherwise harmless inflammatory condition in the nose, and also by the difficulty of keeping the wound aseptic when it was necessary to open the frontal sinus The indications for operation were imperative, as the osteoma was growing fast and had already produced choked disc. There was danger of impending epilepsy, headache blindness, etc, if the growth, harmless in itself, should increase much more

37 **Subdural Hematoma**—Kronlein's patient was a young man who fell on his head The only symptom at first was headache On the sixth day symptoms of Jacksonian epilepsy were observed with signs of increasing pressure on the brain A subdural hematoma was diagnosed and its evacuation restored conditions to normal

39 **Operations in Posterior Cranial Fossa**—Krause gives an illustrated description of the technic with which he has successfully removed tumors in the cerebellar pontine angle, and reports a case in detail The patient was a woman of 45 The tumor shelled out readily, and proved to be a fibrosarcoma measuring 18 by 25 mm The symptoms of general pressure on the brain had developed gradually in the course of three years The first symptoms were attacks of vertigo, gradually increasing to actual syncope, disturbances in hearing and tumbling toward the right side, with, later, intense headache, vomiting diplopia and occasionally unconsciousness and convulsions The left pupil was more dilated than the right and the corneal reflex on the side of the tumor was abolished Pains were sometimes felt in the right side of the face The right ear was entirely deaf The patient could

hardly walk and turned constantly toward the right. If the eyes were closed the woman fell, and generally toward the right side She had from three to ten attacks of vertigo a day, even when in bed The mastoid process was not tender, the pulse was somewhat accelerated The woman rapidly recovered after removal of the tumor, the choked disc subsided and the hearing and ocular reflexes were soon normal on both sides She could walk without trouble or dizziness, and even with the eyes closed there were only slight traces of the former disturbances In a second, similar case, a sarcoma, as large as a hen's egg, was found at the base of the brain, and the attempt to remove it was abandoned The Gasserian ganglion was transformed into a tumor mass, and yet the patient had never suffered from trigeminal neuralgia In some other cases internal hydrocephalus induced symptoms suggesting cerebellar tumor, and Krause exposed the left hemisphere of the cerebellum on one side and, three weeks later, the other hemisphere, but found nothing, although he made an incision in each so that he could inspect the arbor vitæ to a depth of 3 cm One patient derived great benefit from the relief from pressure after the operation, the choked disc subsided on each side, and she survived for three years Autopsy revealed internal hydrocephalus He describes some other cases in which autopsy confirmed the diagnosis of an extramedullary tumor near the atlas, and showed that it could have been easily removed if the surgeons had had a little more courage. He adds that the amount of compression which the spinal cord will bear is amazing

41 **Perforation of Ulcer of Stomach**—Körte relates his experiences with 19 cases of operative intervention for perforation of a gastric ulcer, with the recovery of 13 of the patients All but five of the patients were men The rigid abdominal walls were the most characteristic sign of the perforation, next came extreme sensitiveness to pressure at the epigastrium, at the umbilicus or over the entire abdomen The contact of the acid gastric juice with the serosa ordinarily induces intense pain, but vomiting was noticed in only six of the cases and soon subsided The physician must not be misled by this to assume that the trouble is transient In two instances appendicitis was supposed to be responsible for the symptoms and the incision was made in the ileocecal region An important sign for differentiating perforation in the stomach is the acid, sour smell of the effusion, while the effusion in case of appendiceal peritonitis soon becomes ichorous One of the patients had been operated on twice, with a gastroenterostomy for callous ulcer of the pylorus, when the signs of perforation developed a year after the last operation Four other patients were moribund when received In three other cases an exploratory laparotomy was made on suspicion of perforation In one case the trouble was traced to morphin addiction, in another no lesion was found in the abdomen and the patient died, presumably from perforation of an ulcer in the esophagus In the third case nothing abnormal was found to explain the severe gastric symptoms occurring after a fall, and the patient soon recovered

Brentano reviews 75 cases of perforation of gastric ulcer observed at the Urban Hospital, including 46 women, with 30 deaths, and 29 men, with 18 deaths In 15 cases there had been nothing in the history to suggest a stomach lesion

42 **Peritonitis in Little Girls as Sequence to Acute Salpingitis.**—Riedel has had occasion to observe eight cases of peritonitis in girls between 4½ and 9 years old, secondary to acute salpingitis He operated in every case on the diagnosis of appendicitis but was unable to save the patients Another case was observed, but no attempt at operation was made The same findings were encountered also in two young women The infection was due to staphylococci or streptococci which had entered from the vagina and passed into the peritoneum through the tubes All the patients had intact hymens An other little girl had appendicitis first and then salpingitis This brings to 17 per cent the number of cases of peritonitis from infection by way of the vagina in a total of 48 cases of peritonitis in girls under 10 at the Jena Hospital.

44 **Lesions at the Splenic Flexure of Colon.**—Madelung concludes this exhaustive study of the pathologic anatomy and surgery of this part of the intestine with the statement that cancer of the splenic flexure offers more favorable conditions for a cure, even in advanced stages than cancer at other points in the large intestine A palpable tumor can not be counted on Study of the literature shows that glandular involvement is extremely rare In six cases a complete cure for a period of from three to eight years to date is known

45 **Kidney Surgery**—Cebele reviews 50 operations on the kidneys done in von Angerer's service at Munich His experience with cryoscopy of the blood has always been favorable and chromocystoscopy has also rendered him good service, but catheterization of the ureters is his main reliance Seven of the 50 patients died, but in no case was the death due to insufficiency of the remaining kidney There was a history of gonorrhea in a large proportion of the cases

46 **Tuberculosis of Kidneys and Bladder**—Kümmell warns that in tuberculous cystitis or nephritis the trouble is frequently referred to the genital organs, and the patients are treated for displacement of the uterus or for some allied condition, the physician not taking the trouble to examine the urine which would give the clue to the trouble A chronic gonorrheal infection in a man or woman frequently causes an existing tuberculous affection of the bladder or kidney to be overlooked Slight cloudiness of the urine, apparently slight cystitic disturbances, especially in women, slight pain in the kidney region and disturbance in the general health pallor and some loss in weight should compel examination of the urine for tubercle bacilli Catheterization of the ureters confirms the diagnosis

47 **Cancer of the Tongue**—This volume of the *Archiv* was dedicated to the late E von Bergmann on his seventieth birthday, and is illustrated by numerous plates In this article on cancer of the tongue, Küster refers to von Bergmann's pioneer work in this line, and then describes a case in which great improvement followed the simultaneous application of Roentgen exposures and ligation of the external carotid on both sides The patient was a man of 36, a cigar maker, and the growth was inoperable when first seen but under the treatment mentioned conditions improved to such an extent that the radical removal of the cancer became possible The same measures applied in a second case were temporarily successful but collateral circulation soon annulled the effect of the ligatures and the patient succumbed to the progress of the cancer Küster states that he has ligated the external carotid on both sides 33 times and has found 130 cases in the literature The mortality has been about 1 54 per cent His experiences were always favorable, even in his latest case, in which the artery was ligated on account of an angioma of the scalp in an infant of six weeks His experience with cancer of the tongue indicates that the operations on the bones should be restricted to the minimum as they are more serious than surgical measures on the soft parts Ligature of the external carotid he adds is no more dangerous than ligature of the lingual artery, while it is far more effectual

51 **Experimental Spinal Anesthesia**—Among the conclusions of the research reported is one to the effect that subdural application of an anesthetic does not cause intoxication unless the drug comes in direct contact with the centers of the medulla oblongata and of the brain Absorption from the dural sac of the small amounts of anesthetics used in spinal anesthesia has no toxic action

52 **Treatment of Effusion into a Joint**—Hildebrand explains the effusion as the result of abnormal nervous excitability on the part of the synovial membrane and states that treatment should aim to reduce this excitability Injection of carbolic acid or tincture of iodin answers this purpose but the effect can be much enhanced by preceding the injection of carbolic acid with an injection of salt solution to wash away the [illegible] secretions from the surface of the membrane thus allowing the carbolic acid to penetrate better into the [illegible] The effect is also enhanced by completely expelling the [illegible] from the part This reduces the amount of [illegible] that they take up the injection better, less resistance to the penetration of the [illegible] the protecting [illegible] influence of

Berliner klinische Wochenschrift.

61 (XLIV, No. 7, pp. 181-208.) *Induced Thrombosis in Treatment of Varices. (Künstliche Thrombose der Var.) Tavel.
62 *Isolated Subcutaneous Injury of Pancreas. (Verletzungen des Pankreas.) F. Karewski.
63 Dyes in Treatment of Experimental Trypanosome Infections. (Farbstoffbehandlung der Tryp.) Weber and Krause.
64 Remission of Multiple Sclerosis for 13 Years to Date. (Prognose der mult. Sklerose.) O. Maas.
65 *Primary and Secondary Tuberculosis in Man. (Tub. des Menschen.) Edens.
66 Age is True Cause of Cancer. (Problem des Krebses.) J. Rüff. Reply by B. Fischer in No. 10.
67 (No. 8, pp. 200-232.) *Magnet Operations in Ophthalmology. (Magnet. Op.) J. Hirschberg.
68 Statistics of Primary Intestinal Tuberculosis. (Darmtub.) J. Orth.
69 *Registering Contractions of Left Auricle by Way of the Esophagus. (Registrierung der Kontrakt. des 1. Vorhofs.) G. Joachim.
70 *Test for Sugar in Urine. (Bestimmung des Harnzuckers.) I. Bang.
71 *Ultramicroscopic Study of Granules in Leucocytes. (Leukocyten und Hämokonien.) M. Mühlmann.
72 Determination of Hypermetropia without Skiascopy. (Hypermetropie.) Lyritzas.
73 Importance of Breast Milk in First Few Days of Life. (Frauenmilch in den ersten Lebenstagen.) B. Salge.
74 (No. 9, pp. 232-264.) Technic of Bronchoscopy. (Bronchoskopie.) G. Gottstein.
75 Proliferation of Cancer Due to Action of Schüller's Parasites. (Ursache der Krebswucherung.) M. Schüller.
76 Lactic Acid a Secondary Product of the Muscular Spasms in Eclampsia. (Angebliche ursächliche Bedeutung der Fleischmilchsäure bei Eklampsie.) J. Donath.
77 Erroneous Interpretation of Enlarged Bronchial Glands in Children. (Physikal. Brustbefund.) H. Neumann.
78 *Blindness from Quinin. (Chinin-Amaurose.) W. Seeligsohn.
79 Physiotherapy of Tabes Dorsalis. (Physikal. Behandlung.) E. Tobias and E. Kindler.

61 **Induced Thrombosis in Treatment of Varices.**—Tavel noticed that patients with varices who suffered from thrombosis, after operations on the enlarged veins, fared better later than those patients who had displayed no tendency to thrombosis. Acting on this suggestion, he intentionally induces thrombosis in such cases, and has found the results invariably superior. His first communication on the subject was summarized in THE JOURNAL, Feb. 18, 1905, page 590. His experience now includes 27 cases, all with gratifying outcome. The main trunk of the vein may be ligated by passing a curved needle around the vein and bringing it out through the hole in which it entered, thus encircling the vein with a loop which is then tied fast, the ends of the thread are cut off near the knot. The skin is then taken up in a fold, when the knot slips down out of sight under the skin. His more usual technic, however, is by a transcutaneous method which allows resection of a part of the vein, generally about 4 cm. In order to locate the vein, he outlines its course with fuchsin as the patient stands. In case the vein is not visible or palpable he draws a line from the inner condyle to the middle of Poupart's ligament. This corresponds approximately to the course of the long saphenous vein, although in the middle of the thigh the vein is sometimes a little farther toward the back. Twenty-four or forty-eight hours after the ligature he commences to induce thrombosis. This he accomplishes by injecting 10 c.c. of a 5 per cent. solution of carbolic acid. This irritates the intima of the vessel and induces autochthonous thrombosis which spreads upward to the ligated point. A few days later, or at intervals of two or three days, another injection is made at another point until the entire varicose region is completely thrombosed, and the walls of the vessel become transformed finally, more or less, into connective tissue. The patient stands on a chair in front of a table and the syringe is introduced into the vein until the blood flows, then the syringe is filled with the carbolic acid solution and the patient sits down on the table and the solution is injected at two or three points. After this the patient is placed in bed or allowed to leave the clinic on foot, according to the conditions. There is occasionally a slight rise in temperature, but no disturbance has ever been noted in the general health. Usually the new circulation is soon established, but sometimes two or three months may elapse before normal conditions are restored. To promote the circulation he sometimes applies bandages or superheated air to the part and gives hamamelis and caffein internally, especially in case of diffuse phlebectasia. The ligature must invariably be applied well above the points where thrombosis is suspected or anticipated. The ligature above the focus of phlebitis and the induced thrombosis shorten the time of confinement to bed, he states, exclude all danger of embolism, and effect a radical cure of the phlebitis which otherwise is liable to recur.

62 **Treatment of Isolated Subcutaneous Injury of Pancreas.**—Karewski remarks that persisting hemorrhage and escape of pancreatic juice after injury of the pancreas are both threatening, but the latter is the more serious of the two and should be apprehended when the injury is near the head of the pancreas. He describes a case in which the laparotomy followed the injury in three hours, in Garré's case five and one-half hours elapsed before either hemorrhage or fat necrosis had had time to assume alarming proportions. Two other patients were saved by a prompt laparotomy and 12 succumbed when the operation was delayed. To promote the healing of the fistula after operation, it is important to restrict the production of the pancreatic secretion and to ward off metabolic disturbances from the loss of the juice. Meat and fat proved the most useful in this respect, in his case, while carbohydrates of all kinds had to be avoided. Large doses of sodium bicarbonate during and between the meals also checked the production of the juice. The healing of the fistula was promoted by application of tincture of iodin, with antiseptics to the skin outside to prevent maceration. The rapid healing of the pancreatic fistula in this case and the complete recovery of the lad after the severe injury to the pancreas render the case noteworthy as suggestive for future injuries of the kind.

65 **Primary and Secondary Tuberculosis in Man.**—Edens reports some new cases of intestinal tuberculosis—a total of 30. Infection in infancy, he thinks, is very common, but the individual organism reacts to it in some persons with the production of immunity, while in others the reaction takes the form of the "scrofulous diathesis," which entails greater susceptibility to secondary infection later.

67 **Magnet Operation in Ophthalmology.**—Hirschberg has applied the magnet in 347 cases of injury of the eye during the 27 years since he first suggested its application in ophthalmology. In 36 out of 64 cases between 1896-1903, an iron splinter in the retina or vitreous body was successfully removed with the magnet, leaving little if any impairment of vision. In 22 cases the splinter was so large or inflammation had already set in, so that finally the eye had to be enucleated. In 2 recent cases the magnet operation was performed on the injured eye when the other eye had long been blind. In one of these, an iron splinter, 2x2 mm., weighing 5 mg., was removed from the anterior chamber with the large and hand magnets nearly two years after the injury, with successful outcome.

69 **Registration of Auricle Beat Through the Esophagus.**—Joachim describes a case of "dissociation of the auricle and ventricle rhythms." The presumptive diagnosis from the extreme slowness of the pulse and the syncopal spells was confirmed by registration of the auricle beat by way of the esophagus, according to the technic described by Minkowski and Rautenberg (THE JOURNAL, Sept. 22, 1906, page 975). Joachim reproduces the tracings, but adds that the procedure is extremely tedious and disagreeable for the patient, even to the point of affecting the general health for several days afterward.

70 **Quantitative Test for Sugar.**—Bang makes high claims for the convenience, extreme precision and rapidity of the simple test for sugar in the urine which he here describes. The presence or absence of albumin does not affect the findings, and they are more accurate in the presence of very small amounts of sugar than with any other test, polarization, fermentation or reduction. Instead of a caustic alkali he uses potassium carbonate in the solution of copper, and titrates with hydroxylamin until the blue tint vanishes. The first copper solution is made by dissolving with heat 500 gm. anhydrous potassium carbonate, 400 gm. potassium sulphocyanate, and 100 gm. potassium bicarbonate in 1,200 c.c. water. When the mixture has cooled, a solution of 25 gm. crystallized copper sulphate in 150 c.c. water is added, the vessel rinsed, and the jar filled up to the 2 liter mark. In another vessel,

0 55 gm hydroxylamin sulphate, and 200 gm potassium sulphocyanate are mixed with water to the 2 liter mark Both solutions are durable, and 1 c.c of the hydroxylamin solution will decolor 1 c c of the copper solution To 10 c c of urine 50 c c of the copper solution are added and the whole boiled for three minutes The vessel is then rapidly cooled under running water, and the fluid is then titrated with the hydroxylamin solution until the blue tint vanishes, which is usually in a few seconds He gives a little table showing that 44 c.c. of the hydroxylamin solution correspond to 4 9 mg sugar, 33 c c to 15 4 mg sugar, 22 c c to 27 7 mg sugar, 11 c c to 41 8 mg sugar, and 1 c c to 59 4 mg, and so on He is now experimenting to establish beyond question the standards for normal urine, for comparison

71 **Granules in Leucocytes**—Mühlmann reports that he has seen active movements in the granules in living leucocytes He also states that the ultramicroscope has shown that Müller's "hemoconia" or blood dust consists in reality of particles of fat in the blood

78 **Quinin Amaurosis**—Seeligsohn's patient was an anemic young woman who took 6 gm (90 grains) of quinin in the course of three days Vertigo, tremor and absolute deafness and blindness followed Hearing returned in a day or so, but the blindness persisted for ten days and normal vision was not regained for two months

Deutsche medizinische Wochenschrift.

80 (XXXIII No 11 pp 409-448) Gangrene of the Lungs (Lungengangrän) C. Beck
81 *Infiltrating Inflammation of Colon and Sigmoid Flexure (Infiltrir Colitis und Sigmoiditis.) T Rosenheim
82 *Tuberculous Coxitis (Tub Coxitis) A Hoffa
83 *Pathology Treatment and Prophylaxis of Electric Accidents (Elekt Unfälle) S Jellinek
84 Hydrotherapy of Menopause (Hydrother des Klimakteriums) A. Zweig
85 Progress in Military Sanitation (Militarsanitätswesen) E Schill
86 (No 12 pp 449-488) *Intravenous Strophanthin Therapy (Intraven Str Taerapie) H Starck.
87 Indications in Appendicitis (App) M. Jordan
88 Staining Technic for Pale Spirochete (Nachweis der Spinal) J Schereschewsky
89 Spirochetes in Frambesia (Yaws) (Spir Befunde bei Framb tropica) M Mayer
90 Rock Crystal Tips for Phototherapy of Mucous Membranes (Bergkristallansätze für Lichtbeh von Schleimhäuten) T Senuler
91 Rudolf Virchow's Letters Home (Virchow's Lehr und Wanderjahre) J Schwalbe Concluded

81 **Isolated Colitis and Sigmoiditis**—Rosenheim has had occasion to observe a large number of cases of a localized acute or chronic inflammatory process in the colon or at the sigmoid flexure The sigmoid process is generally chronic with occasional acute exacerbations, and the usual symptoms are disturbances in defecation and pains, tenderness of the part affected and thickening of the wall of the intestine to actual tumor formation The extension of the infiltration over considerable stretches of the intestines speaks against the malignant nature of the process, as also normally shaped stools, showing the absence of stenosis He describes 5 typical cases to show the various manifestations of the affection One patient was a man of 63, somewhat "nervous" with arteriosclerosis who noted a progressive tendency to obstipation, with blood and mucus in the stools, at last, dyspepsia and loss of weight Gradually the abdominal pains increased in intensity, with, finally, a severe attack of colic, which recurred after three months The sigmoid flexure rapidly swelled and signs of peritonitis were observed with transient fever, muscular rigidity on the left side and fetid stools with pus The acute symptoms then promptly subsided, and in the course of a few months the whole process in the sigmoid flexure gradually subsided and the intestinal functions returned to normal The treatment was mainly dietetic a bland mixed, vegetable diet free from residue bed rest hot poultices to the side, and daily injections of 100 gm warm oil The lack of proportion between the clinical picture and the extent and softness of the tumor were the main points for differentiation of the condition from cancer In a second case an otherwise robust man noted progressive obstipation and painfulness of the left side of the abdomen The colon above and the rectum seemed to be normal, while the sigmoid region was evidently the seat of infiltrating inflammation The wall of the intestine was thickened over a large expanse, as also in the third case related In this case sigmoiditis accompanied by infiltration of the wall developed with a stormy, acute onset, with fever and great disturbances, subsiding into a chronic phase, manifested by constipation, blood and mucus in the stools and a palpable tumor During convalescence a drastic purgative brought on an exacerbation, which subsided under treatment, with apparently complete restitution The restoration of function and vanishing of the tumor confirmed the non malignant character of the affection Another differentiating point is the possibility of introducing the endoscope tube for a considerable distance—as far as 40 cm in one instance In another case the sigmoiditis was mild, but with recurring disturbances, relieved by appropriate measures—brief cold sitz baths, with brisk rubbing afterward of the entire body until the extremities were warm and a bland vegetable diet The sigmoid region now feels normal on palpation Previous local and internal measures had proved ineffectual In the fifth case reported a severe inflammatory process in the sigmoid flexure developed on the basis of an old persisting enteritis accompanied by recurring diarrhea

82 **Treatment of Tuberculous Hip Joint Disease**—This clinical lecture by Hoffa is illustrated and presents the present status of treatment in detail Even at the best it is very long and tedious with exclusively conservative measures, but his extensive experience has conclusively demonstrated that the ultimate results are much better, functionally, than with operative measures Prolonged supervision of patients has shown that much greater functional capacity is the rule in later life among those treated conservatively Even after operation, it is usually necessary that a support should be worn for years to ensure good results He warns against abrupt measures in treating the contractures and luxations left after the coxitis has apparently healed They are too liable to fan the almost extinct focus into a flame again The contracture must be very slowly and gradually corrected He adds that the greatest progress that has been realized in the last decade is in the technic of dressings and supports

83 **Electric Accidents.**—Jellinek has devoted many years of research and experiments to the subject of accidents from electricity In regard to treatment he advises systematic artificial respiration with stimulants for the heart, massage, faradization of the heart and neck regions venesection, injection of camphor adrenalin, etc Lumbar puncture is also indicated, as he relates in detail and is entirely harmless In the cases in which no results are observed after hours of artificial respiration, it might be advisable he says to turn on the current again through the body the flat, positive electrode is placed over the heart region the rod shaped negative electrode, wrapped in cotton impregnated with salt solution being placed in the rectum The current is then turned on and off, instantaneously several times the heart and vessels in the neck are examined after each application He has previously reported experiments on animals which showed that it is sometimes possible to start a heart to beating by means of the same current which had previously arrested the heart action Of course this heroic measure is indicated only in cases otherwise given up for lost but future research may justify its application earlier The patient during all the maneuvers should be with the head somewhat raised to prevent escape of blood from injured vessels If the artificial respiration is not done according to the rules of the art it may produce conditions which doom a patient who might otherwise have been saved An instance of this kind is related The accident occurred soon after breakfast and artificial respiration venesection lumbar puncture etc had all been applied Autopsy next day revealed that the upper air passages and also parts of the lungs were clogged with stomach content and that the right ventricle was full of air The latter was undoubtedly due to suction of air through the opening into the vein when the artificial respiration was resumed after venesection [illegible] Jellinek warns that the artificial [illegible] during venesection and [illegible] vein has been compressed [illegible] above Artificial respi[illegible]

for many hours The only limit to the time devoted to artificial respiration is the appearance of unmistakable signs of actual death Many a life might have been saved, he adds, if artificial respiration had been kept up longer Much and perhaps everything depends on how soon after the accident artificial respiration is commenced Expectant, symptomatic treatment with strict supervision should be the rule after resuscitation, especially on account of the possibility of sudden development of mental disturbances Prolonged warm baths with cold applications to the head have been found useful, with bromids in case of agitation The tendency to retention of urine and feces and to chilliness should be combated, and the skin lesions should be treated conservatively They may be several months in healing

86 **Intravenous Administration of Strophanthin.**—Starck announces that intravenous injection of strophanthin allows the drug to act almost exclusively on the heart, while the dosage can be mathematically exact, and the effect on the heart is always amazingly prompt and powerful Tests with it on animals and in the clinic have shown that this technic far surpasses all other methods in its rapid and energetic tonic action on the heart He gives the details in 7 cases in which it was used No by effects were ever noted, although as much as 2 25 mg was injected in one case in the course of three days The average dose was 1 mg, never more than 1.25 mg, at a time The pulse changes almost at once after the injection, approximating normal characteristics, as also the heart and lung action One patient was in such an advanced stage of pulmonary edema that the strophanthin was injected as the last resort for an apparently moribund patient, but the injection of 1 mg of strophanthin induced prompt relief, freeing the lungs and raising the output of urine from 700 to 3,000 c c in twelve hours In another case the urine increased from 300 to 3,000 c c in twelve hours The results were better in the chronic cases He affirms that his experiences seem to indicate that strophanthin is less toxic than has been hitherto supposed

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92 (CLXXXVII No 2 pp 197 349) *Acromegaly and Connection with Tumors of Hypophysis. (Akromegalie) G Cagnetto
93 Adeno-rhabdomyoma of Left Lung in Eight month, Still born Infant (Adeno-Rhabdomyom, etc.) R Zipkin
94 Myoblastic Sarcoma. (Myoblastisches Sarkom) H Kathe.
95 Elastic Tissue in Neoplasms (Elastische Gewebe in Neubildungen) G A. Waljaschko
96 *Morphology Appearance and Significance of Lymphocytes and Mononuclear Leucocytes in Gonorrheal Urethral Secretion and the "Ball Nuclei" (Gon Urethralsekret und Kugelkerne.) J Neuberger
97 *Differentiation of Pneumococci and Streptococci (Dif.-diagnostische Studien über Pn und Strept) R. Levy
98 *Gummatous Pleurisy (Pleuritis gummosa) M Lissauer

92. **Relation of Acromegaly and Tumors of the Hypophysis**—Cagnetto writes from Padua to report 5 cases of acromegaly with concomitant tumors in the hypophysis He also reviews the recent literature on the subject of the connection between the disease and the tumor The evidence thus accumulated testifies against the assumption that acromegaly is due to excessive functioning of the hypophysis Cases of acromegaly are known in which there is no hyperplasia of the glandular lobe of the hypophysis as also cases in which the gland has actually no functioning elements Tumors of the hypophysis have been encountered which contained abundance of functioning cells, and yet no acromegaly was observed

96 **Morphology of Cells in Gonorrheal Secretions**—Neuberger's extensive study of the morphology of lymphocytes, mononuclear leucocytes, etc, in the urethral secretion in numerous cases of gonorrhea demonstrated among other findings that the mononuclear leucocytes were exceptionally active as phagocytes under these conditions, incorporating especially the multinuclear leucocytes which assumed a spherical shape. Gonococci were frequently found in them also

97 **Differentiation of Pneumococcus and Streptococcus**—Tests with sodium taurocholate proved the most reliable in Levy's differentiating research on these micro-organisms Blood agar and the other media gave contradictory results He announces that the variety known as *Streptococcus mucosus* is in reality a pneumococcus, and should be designated *Pneumococcus var mucosus*

98 **Gummatous Pleurisy**—In Lissauer's case the numerous signs of constitutional syphilis observed at autopsy and the total absence of tubercle bacilli or tuberculous lesions, confirmed the gummatous nature of the nodular pleural affection

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99 (XXV, Nos 8 9, pp 75 92) Rat Poisoning Aortic Aneurism for 17 Years S Hara
100 Two Cases of Epidemic Cerebrospinal Meningitis Id
101 (Nos. 10 12, pp 93 122) 245 Cases of Typhoid Fever S Isasaki
102 *Carcinoma Among the Formosan People M Matsuo
103 Spontaneous Fracture T Miwa
104 (XXVI No 1, pp 133 134) Acute Yellow Atrophy in an Infant M Karasawa
105 Results of Vaccination in Japan

102 **Cancer on the Island of Formosa**—Matsuo comments on Pagel's statement that he never observed a case of cancer during his ten years of residence in North Borneo, some writers doubt whether cancer occurs in the tropic zone In Matsuo's own experience on the Island of Formosa he encountered a number of cases of cancer among the natives, and reports of the details of 4 typical carcinomata The patients were all over 40, none had ever had malaria, or recognizable enlargement of the spleen In one instance the carcinoma occurred on the foot, starting in an unhealed abrasion of a toe, in 2 cases the breast was the seat of the lesion

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106 (LXVIII No 1, pp 1 104) Radium (Om radium) D Poulsson
107 Pneumotomy (Pneumotomi Helbredelse) D Bull
108 *Fatal Hemoptysis in Pulmonary Tuberculosis (Dødsfald under hæmoptyse) K. Thue
109 *Intentional Subconjunctival Fistula in the Anterior Chamber in Treatment of Glaucoma (Et nyt princip for glaukomets op behandling) S Holth
110 Physiologic Test of Digitalis Leaves (Fysiol prove af digitalisbladd) E Wang
111 *Books in Transmission of Epidemic Disease (En kusma epidemi) A Hanson

108 **Fatal Hemoptysis in Tuberculosis**—Thue states that out of 795 phthisical patients in the public hospital, about one-third had hemoptysis, 447 died in the hospital, death being due to hemoptysis in 13 cases In 7 of these patients no source for the hemorrhage could be detected In 8 instances the fatal hemorrhage was the first hemoptysis that had occurred during the sickness

109 **Intentional Subconjunctival Fistula in Treatment of Glaucoma**—Holth noticed that the cases of glaucoma in which the classical operative measures had been done with apparently defective technic—leaving a fistula—presented much better functional results later than those cases in which the operation had been done with such perfection that no fistula resulted He reasoned that the subconjunctival fistula must contribute to this result, and now intentionally makes a fistula in operating for glaucoma He here describes his technic in detail, with 25 illustrations, and announces that the results of its application in 40 cases have been most encouraging Vollert's favorable experiences with 4 cases were mentioned recently in these columns

111 **Transmission of Infectious Disease by School Books**—Hanson gives the details of a small epidemic of an infectious disease among the pupils in a military school He noticed that the infection occurred in bunches with certain intervals—corresponding to the return of the sick from the hospital The lad first infected had been spending a vacation at home where his sister had the disease No other cases developed until from 3 to 6 days after his return from the hospital to his schoolroom Then 10 lads became infected and were sent to the hospital, no further cases occurred until about a week after they had been dismissed from the hospital, when another bunch of 5 cases developed Every precaution in regard to disinfection before dismissal from the hospital and disinfection of the sleeping rooms had been taken with extreme care, but the return of a group from the hospital was always followed by the development of new cases After this had been noted four times it was found that the lads had taken their schoolbooks with them to the hospital and had used them there and brought them back, without submitting them for disinfection As soon as this was stopped the epidemic was arrested at once

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Original Articles

OBSERVATIONS RELATING TO THE NATURE OF ATROPHY OF INTESTINAL ORIGIN

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PHILADELPHIA

General atrophy that is associated with, and apparently stands in direct relation to, a greater or lesser degree of preceding intestinal disturbances occupies a position of profound importance in the pathology of infancy Marasmus is, indeed, so common and often so intractable that the laity are almost as familiar with its general features as are physicians Much less commonly, but still occasionally, a condition that is, in its chief clinical features, apparently the same as the atrophy of infancy, appears in early childhood In later life, typical cases of this kind are rare, there are, however, very many instances of serious disturbance of general nutrition that seem to bear a direct relation to intestinal trouble, but are too pronounced in their general features to be satisfactorily explained by the mere loss of nutriment that occurs through lack of digestion and absorption—for these patients may still be absorbing an amount sufficient to maintain or improve nutrition, and yet they emaciate or remain about stationary in a condition of more or less profoundly depraved general nutrition Cases of this kind have recently been studied by Roehl, who decides that the disturbance of nitrogen absorption does not suffice to explain the tissue loss, and the general absorption is at times quite sufficient to cover their needs

THEORIES REGARDING ATHREPSIA

An immense amount of work has been devoted to the study of the pathogenesis of infantile atrophy, particularly, but no satisfactory explanation of the nature of the condition has been furnished It has been shown that digestion and absorption are impaired in most or all atrophic infants but the degree of impairment is often by no means enough to explain the atrophy I have myself with Dr Caspar Miller studied the absorption in several such cases, and while it was below normal, it was not exceedingly bad and the infants still absorbed an amount sufficient to have made most of their contemporaries gain in weight and health

The lesions found at autopsy are, too, insufficient to explain the condition There is still a somewhat general belief that an extensive primary atrophy of the intestine occurs in these cases but while this has repeatedly been described and has been considered the cause of the general emaciation it has been shown by Heubner Gerlach and Habel that the appearances on which so much stress has been laid are really due to the manner in which the intestinal wall is prepared and cut for microscopic examination Wentworth's recent able review of the pathology of the condition leaves only a single fact undisproved—Bloch found in several cases an absence of the granules that are normally present in Paneth's cells

The hypothesis has also been put forward (Escherich) that the disorder may depend on the ferments and other obscure biologic elements in human and animal milk This, however, could not explain the matter, for it leaves out of consideration the fact that athrepsia occurs in only a portion of artificially fed infants and not in all.

Recently a suggestion of another kind regarding the nature of the condition has been put forward Since the injection of animals with protein of foreign species is followed by the development, in the blood serum of the animal injected, of substances capable of precipitating the protein that was introduced, Moro and Hamburger have attempted to show that the serum of atrophic infants contains a precipitin for cows' milk—thinking that they could in this manner demonstrate that foreign protein (namely, bovine casein) reaches the circulation in such cases If this were the case, it might be conceived that this foreign protein produces chronic toxic symptoms that lead to emaciation, even though sufficient food be absorbed They were not successful in their work, but Moro has recently found such a precipitin in one case He declines however, to draw any conclusions from this as to the nature of infantile atrophy Even if such a precipitin is frequently to be found its presence may, I think be quite as properly, if not more properly applied in another way, in support of my own working hypothesis regarding the nature of infantile atrophy, which hypothesis I shall describe

RECENT VIEWS OF PROTEIN DIGESTION

I shall first, however in order to make the character of my conception clear find it necessary to refer very briefly to some of the recent transformations of view concerning the nature of protein and the manner in which it is digested and utilized by the tissues and shall refer also to some points in regard to ferments All these matters are well known to those that have had particular interest in such questions but are not yet generally appreciated

The comparatively simple teaching of a few years ago when put into its briefest form was that the digestion of protein consists essentially of hydrolysis into albumoses and peptones and the formation of small amounts of some simpler bodies—chiefly amino acids such as leucin and tyrosin and that the albumoses and peptones are absorbed and in the process of absorption or very soon after this built up again [illegible] The process as conceived at that [illegible] in the main part merely hydrol[illegible] forms of protein—the m[illegible]

remaining protein all the time, and the chief apparent purpose of digestion being to transform the ingested protein into substances that are relatively very soluble and that easily pass animal membranes, that is, to get them into a form in which they can readily reach the circulation

Throughout recent years, however, it has become increasingly evident that the change is much more fundamental than this, and the key to the understanding of the main purpose of digestion seems to have been furnished by more elaborate study of the products of digestion, and particularly by a more intimate knowledge of the composition of protein That is, it has been shown that a protein consists of a union of numerous crystalline substances which are relatively simple in their structure as compared with protein, but still somewhat complex, these are chiefly or entirely so-called amino-acids, among the many of which leucin and tyrosin are the most popularly known representatives Protein substances of different kinds contain varying amounts of the various amino-acids, but they differ quite as much in the quantity as in the quality of the component substances Some forms of protein do contain some kinds of amino-acids that other protein substances do not, but the distinction between different protein substances seems to lie quite as much, if not more, in the fact that this one contains more of certain amino-acids, that one contains less of these amino-acids but more of others To use the picturesque simile employed by the Germans to describe the matter, proteins are constructed of "buildings stones," and stones of many shapes are used in building any protein, but the ultimate structures differ in their architecture, and in giving them their proper form, sometimes more stones of one shape are employed, sometimes more of another

Concurrently with the development of the above mentioned knowledge, it has been shown that the digestive breakdown of protein is much more complete than was previously taught Even pepsin can carry a large part beyond the peptone stage, and trypsin does this much more quickly and extensively than pepsin Trypsin, indeed, is capable, even in laboratory experiments, in some circumstances, of carrying the whole amount of protein beyond the peptone stage, and, hence, under the more favorable conditions that exist in the animal organism, it probably carries most, possibly nearly all, beyond that stage

At the same time, it has been made apparent that the intestinal mucous membrane contains a proteolytic ferment which has been given the name erepsin. Whether this has the characteristics attributed to it by Cohnheim—namely, inability to attack native protein, but active powers of further fragmenting albumoses and peptones—or whether, like trypsin, it can carry on the process from the beginning, is a question that is still *sub judice* Of the existence of a proteolytic ferment in the intestinal mucous membrane, there is, however, no question, and there is every probability that it is produced there and is not simply pancreatic trypsin that has lodged there

It seems at present that the purpose of digestion is to fragment the protein complex thoroughly into its constituent amino-acids or building stones, and that the protein falls first into the hands of pepsin, then trypsin and next the ferment of the intestinal mucous membrane in order that with each attack the fragmentation may be made more complete It is not yet clearly determined whether these ferments actually differ as they have been supposed to do, in the nature of the end products that they produce The progressive action of one after the other may be intended simply to permit each succeeding ferment to put finishing touches on the portions of unfragmented or partially fragmented protein that have escaped the preceding ferments The prime object of this breaking-up process appears to be to yield the amino-acids themselves, in order that they may be available in free form and in proper quantities, for a complete reconstruction, which will yield protein homologous with the individual to be nourished It is not necessary to fragment all portions completely as certain fractions will be obtained that can be reconstructed into homologous forms without complete fragmentation, but except for such fractions it must be complete That the digestive process, together with the subsequent reconstruction process, does accomplish this transformation—that is, that it does change protein of foreign species, containing certain amino-acids in quantities peculiar to this protein, into another form of protein, apparently containing the same amino-acids in quantities peculiar to the individual that has digested and absorbed the protein—has been shown experimentally with almost final positiveness, and it has likewise been shown that the reconstructive process occurs before the absorbed digestive products reach the general circulation, almost certainly, indeed, in the intestinal wall itself

Furthermore, physical chemists consider it to be theoretically well nigh certain that the same ferment that accomplishes fragmentation also causes the reconstruction—that the direction in which a ferment acts, whether toward the production of simpler products or toward the formation of more complex substances is determined, not by the nature of the ferment, but by the physical and chemical conditions of the medium in which it acts and by the concentration of the products of digestion If conditions favorable to disintegration are present, the ferment hastens this, but if the conditions favor synthesis, the same ferment hastens this This has actually been shown to occur with some ferments that act on carbohydrates and fats, and similar observations that are suggestive, though not yet conclusive, have been made regarding proteolytic ferments, the conditions of such experimentation with the latter ferments being much more difficult than those attached to carbohydrate and fat ferments If this view that ferments are capable of reversed action is correct, as a general principle, and this now appears most probable, the same ferment in the intestinal wall that continues the process of fragmentation of the protein food also carries on the process of reconstruction of homologous protein

This cursory statement of some of the main aspects of the present day teaching of the physiology of digestion will, I trust, suffice to make clear the hypothesis that led to the observations I am about to report. My results have not yet been sufficiently extensive or elaborate to justify of themselves, quite so formidable a preamble as I have given, were it not that the explanation is necessary in order to make their bearing clear So far as they go however, they offer some support to the following hypothesis

THE AUTHOR'S HYPOTHESIS

Clinically, it is quite clear that most atrophic infants do well provided they are not already far advanced toward death if human milk can be given them, while with even the most capably conducted artificial feeding,

they usually have, at best, a precarious and long struggle for existence, and very often go slowly, but persistently, toward death It seems, then, that the difficulty consists in making use of milk of foreign species The difficulty does not lie simply in acomplishing the absorption of the elements of the heterologous milk, for, as I have already noted, sufficient is absorbed in many of these instances to produce a gain in other infants

It has seemed to me that the disturbance may be the result of disorder of the ferment function of the intestine That is, when the protein of the food is progressing in the course of its breakdown the final attack by the ferment of the intestine does not occur or is ineffectual, that the protein complex is torn apart more or less completely by the pepsin and trypsin, but that fragmentation sufficiently complete, in order that the structure may be rebuilt in a new form entirely homologous with the patient's tissues, does not take place

Granting the absence or serious reduction of this ferment in cases of atrophy, one of two things may be conceived of as occurring as a consequence in the first place, it might be that the protein would be fragmented to various stages short of absolute completeness—to albumoses, peptones, simpler non-protein amino acid complexes (heptides) and in more or less considerable extent, to free amino-acids—and that these would then be reconstructed, but the synthesis taking place without sufficient preceding fragmentation, the product of synthesis is not the normal one, but is more or less hybrid in character To use again, for clearness of conception, the building stones simile, it would be like taking away the upper structure of a building, while leaving the foundation unaltered, and then making the new structure conform to the old foundation, instead of tearing out the latter completely and building anew from the start The infant would, in such a case, have his circulation and tissues supplied with more or less markedly foreign protein, while normal infants receive homologous protein The infant nourished with mother's milk, even though he absorbs all his protein food wholly unfragmented or only half fragmented, would not so far as we know, be crippled by this, for his food protein is already homologous The artificially fed infant that I have postulated, however, who receives imperfectly broken down, and hence improperly reconstructed protein, has manifest difficulties in his way in carrying out metabolic processes, and the most evident difficulty would be in tissue construction He would be able to use much, at least, of the more or less completely foreign protein in obtaining energy, that is, he would be able to disintegrate it, for it is known that animals can thus utilize considerable amounts of foreign protein when introduced subcutaneously or into the circulation In attempting to use it to construct tissue, however, he would be obliged to go through the difficult task of disintegrating again, and then completely reconstructing it, while when the tissues are as is normally the case, served with homologous protein, it would seem evident that the process of construction and repair of the tissues would be comparatively easy We have, indeed, no knowledge that the tissues are capable of building new tissue from foreign or partly foreign protein served thus directly to them and it may readily be that they are more or less completely incapable of it They can undoubtedly secure energy from it and can transform one variety of homologous protein into another variety of homologous protein but this is very different from transforming a foreign protein into a homologous protein Even if they could do the latter, to impose on them the necessity for carrying it out would be to make entirely unnatural demands of them, and they would doubtless be likely often to fall under the extra burden

The second idea conceivable as the result of absence of the intestinal proteolytic ferment is dependent on complete acceptance of the theory of reversibility of ferment action While this theory now appears to be probably susceptible of general application, this has not been actually demonstrated to the same extent as have the other matters that I have so far used in constructing my hypothesis Therefore, although this theory will probably be shown to be correct, I mention its relation to the subject under discussion in only a secondary place In case it applies in this instance the effect would appear to be that, the intestinal ferment being reduced or absent, not only would disintegration of the protein suffer, but the especial agent that carries out the reconstruction of protein being decreased or absent the reconstruction also would be more or less completely absent Instead, therefore, of entering the circulation as hybrid reconstruction products, the more or less completely fragmented products would themselves go into the circulation, and use of them by the tissues, in the synthesis of new tissue, would be much the same difficult process as in case they had been made into hybrid protein

Either of these ideas would be in harmony with the repeatedly mentioned fact that absorption in many of these cases is sufficiently good to maintain nutrition, for incomplete fragmentation would not prevent absorpiton, since digestion products, all the way from albumoses on, are readily capable of absorption—and indeed, this occurs with many unchanged albumins The hypothesis would in either case also, be in harmony with—indeed, it is dependent on and, if correct explanatory of—the fact that the difficulty lies in the utilization of milk of foreign species There is no good evidence that infants ever fail to assimilate human milk, unless they are already desperately ill, provided that the milk is not so rich in some of its constituents as to upset digestion or so poor as to be insufficient, and provided, also, that the mother or nurse supplying the milk is not the subject of physical or emotional disturbances that presumably cause the quality of the milk to be disordered In other words, there is no evidence that an infant, not desperately ill, that is taking normal human milk of such composition that it does not disturb digestion, ever fails to be able to utilize this milk on account of the character of its constituents On the other hand, large numbers of infants, when fed on foreign (that is, usually cows') milk even when the constituents are of wholly normal quality do badly or die, however one may vary the proportion of the constituents in deference to difficulties in digestion often indeed even when no noteworthy difficulties in digestion are present The experience of Westcott Holt and others shows that many malnourished or even severely atrophic infants that do badly on cows' milk mixtures exhibit remarkable improvement if, while their diet still consists chiefly of the same mixture small quantities of human milk are added This suggests strongly that they can secure from the artificial food the energy that they need if only the essential moiety absolutely demanded for tissue building and repair is given them in normal form.

The hypothesis also confor[illegible] th the fa[illegible] fan-
tile atrophy as wel[illegible] [illegible]tion
dren and adults [illegible]
There is no defi[illegible]

these are simply ill-nourished, while on the other side they are the subjects of persistently progressive atrophy; nor are there any cases that can be labeled essentially fatal. The worst of them almost may get well if only one can secure a food that is especially suitable in the particular case. If in such cases human milk is used improvement is often remarkably rapid, while in other foods it is, as a rule, slow and laborious at best. The hypothesis that I have described does not conflict with these facts, but is rather supported by them. Such variations in the severity of atrophy may be chiefly a question of a larger or smaller degree of reduction of the ferment action of the intestine. It is not to be expected that the ferment or ferments would often be entirely and permanently absent; it is rather to be expected that various degrees of reduction of the amount or the activity of the ferments would occur in different cases, and that there would correspondingly be more or less severe results. Since there would be no essential anatomic change in the intestine but simply more or less complete failure of a function—a function, however, that would seem to occupy a critically important position in the process of reconstructive growth—any little increments added to the powers of the patient to carry on functions properly (such increments as would be secured through better feeding and better hygiene, and the consequent better general condition) would increase the manufacture of ferments as well as other functions, except in cases so badly damaged that the regenerative power were lost.

The general line of thought that I have followed, whether my hypothesis is correct or not, would also offer a reasonable explanation of the fact that extreme grades of atrophy are so much more common in very early life than in other periods. After growth is completed, synthesis of tissues is necessary only in so far as repair is required; while in the young not only is repair required also, but there is in addition to this a relatively enormous amount of synthesis necessary in manufacturing new tissue. Any disorder that makes synthesis of tissue more difficult will consequently fall particularly heavily on the young.

I would likewise note that the one point regarding the pathology of infantile atrophy that is as yet unassailed, Bloch's observation that granules are absent from Paneth's cells, seems to me to suggest at least that the ferment functions of the intestine may be at fault. Similar granulations are observed in other secretory organs when they [illegible] normally, at those times when they are preparing their digestive secretions; while after the secretions are discharged the granules become much reduced in number or entirely absent. Lack of granules from the cells in the intestine of atrophic infants may, therefore, readily mean that these cells are not producing digestive secretions, while the same cells do produce them in other infants.

I have previously mentioned the possible presence of precipitins for [illegible] in the blood serum of atrophic infants. This matter is not of much importance in this connection, as there is little evidence as yet [illegible] precipitins exist. If they do exist it is [illegible] in conformity with the [illegible] I have outlined [illegible] with the suggestion that [illegible] results from the presence of the foreign [illegible] in the circulation. Those that have experimented on the effect of [illegible] injections of [illegible] foreign protein [illegible] but it may [illegible]

the question immediately under discussion, that atrophic infants show absolutely no clinical evidence of any such anaphylactic state as has been described by some authors as consequent on the subcutaneous administration of very small amounts of foreign protein. Yet if such infants do have casein-precipitins in their blood, they must absorb directly quite as large amounts of casein as are used in injection experiments. This point seems to me to rob the theory of a foreign-protein intoxication of its chief established basis, so far as infantile atrophy is concerned; although I, of course, do not deny the possibility that such an intoxication may have something to do with the condition.

CASE STUDIES.

Up to the present, my studies regarding the determination of my hypothesis have consisted of investigation of the proteolytic power of the intestines obtained at autopsy in eight cases. Three of these cases were characteristic instances of progressively fatal atrophy (two in infants and one in a child of two years); three were cases of advanced emaciation that was known to be due to other causes than simple atrophy, these cases serving as controls; and the other two cases were instances in older persons of continuous and finally extreme emaciation in which autopsy showed no cause.

Although I have been working on the question, as opportunity offered, for a year past, the number of cases that I have to report is small because I have, in order to avoid confusion, limited my observations relating to the atrophic cases carefully to those in which the clinical conditions and the autopsy findings showed an entire absence of evidence of infection of the digestive tract, and in which also there was absence of evidence of poor digestion or of a noteworthy degree of gastroenteritis. I have found it difficult to secure such material from entirely reliable sources. The three cases of infantile atrophy that I report were, however, of this kind. All showed at autopsy merely the lesions of simple, uncomplicated atrophy, and clinically all had shown merely progressive wasting, with no gastric symptoms. Intestinal symptoms also were absent in all except Case 3 and [illegible] in which two or three bowel movements occurred at times in the 24 hours. The movements, however, were not large, appeared well digested, were of good color and did not contain visible mucus.

Case 1 was under the care of Dr. Edward Hill, who did the autopsy. Cases 2 and 3 were under Dr. [illegible] care at the Children's Hospital, and Dr. [illegible] and Dr. Howard Carpenter made the [illegible] on them. For the material from the other cases I am indebted to Dr. [illegible] and Dr. [illegible]. I wish also to acknowledge my especial indebtedness to Dr. [illegible] Henderson for aiding me in the study of the cases. The details of the methods used will be given later with the figures obtained. At present I shall briefly discuss the results.

In the first of the three cases of infantile atrophy, the proteolytic ferment in the intestinal mucous membrane was present in extremely small amount. [illegible] was greatly reduced as compared with the [illegible] cases, and in the third case, which was the most [illegible] in its progress, the infant dying at five months, no fermentation was demonstrable. In the first of the two cases of emaciation of undetermined cause in older persons, fermentation was exceedingly slight; in the second [illegible] practically could not be demonstrated at all. Indeed, in the whole group of five atro-

phic cases, all those that show slight ferment-action provide, to indicate this, figures so small as to be almost or quite within the range of error Since, however, in all instances, two nitrogen-estimations were, as is usual, made for the purpose of controlling the results, and since, in all instances (except case 5, in which the control was lost), the two estimations corresponded practically exactly, I think that the figures are accurate, and do not indicate slight ferment-action

The figures from the three control cases that had not simple atrophy do not, to be sure, indicate the digestion of large absolute amounts of protein, but they do show relatively large amounts as compared with the atrophic cases, and it must be remembered that I was dealing with small figures in all cases, since, as may be seen in the protocols of the experiments, only 10 c c of milk was introduced in each instance for the ferment to act upon, in addition to the small amount of protein present in the extract which contained the ferment, and the amount of milk mentioned represents only about 0 05 grams of nitrogen Considering that the period of digestion was purposely made short (only four hours), in order to be more certain of excluding bacterial action, the figures in the non-atrophic cases really show a very considerable degree of digestion, while the atrophic cases, at best, show almost none.

The objection may be offered that the differences were due to bacterial action Toluol was used freely, however, the experiments were made so short that there was little opportunity for bacteria to act, and, more important than this, there are no irregularities in the results to suggest that bacteria had been active. It is, perhaps, impossible in experiments carried out as these were with an extract of the mucous membrane, to exclude bacterial action absolutely I used this method, however, instead of attempting to isolate the ferment by means of precipitation and dialysis, because I believe that it is possible only by means of the method followed to secure quantitative comparisons in different cases, and bacterial action cannot be said to have produced the results obtained, unless one assumes the rather strained position of considering that bacterial proteolysis occurred regularly in the non-atrophic cases, while it was regularly absent or almost absent in the atrophic

Leaving aside the two cases in older persons for the present, the bearing of the results in the three of infantile atrophy seems to me to be the following So far as these cases go, they harmonize with the hypothesis that I have stated, since they demonstrate that in these cases there was great reduction or entire loss of proteolytic power in the intestinal mucous membrane. It may readily be thought that this was a mere secondary effect of the profound emaciation, but this appears decidedly improbable, when one considers the three control cases, all of which were extremely emaciated, but as the result of definite causes other than simple atrophy These cases show very much greater proteolytic action than do the atrophic cases It might be considered, also, that there was simply a general reduction in the ferments of the digestive tract. I attempted to exclude this objection by testing for pepsin in extracts of the gastric mucous membrane of the atrophic cases, and in all three instances I got a markedly positive result, hence pepsin was present in all

Beyond what I have said I do not think I can speak decidedly as to the meaning of my results If continued studies shall show similar results consistently, this will demonstrate definitely a marked disturbance of the ferment-function of the intestine, and will indicate strongly that this has an important primary relation to the atrophy Further studies are necessary, however, in order to show that this is a constant condition in atrophy, and a condition that is usually absent in other cases Furthermore, in addition to the line of observation that I have been following, it is important to determine whether the intestine does or does not, in these cases, retain its power to produce secretin and enterokinase, and thereby to excite secretory activity in the pancreas and to activate the pancreatic trypsin It is likewise important to determine, if possible, to what extent the pancreas retains its functional capacity in these cases, although this is extremely difficult to do satisfactorily with postmortem material, because in extracts of the pancreas the trypsin becomes, to some extent, activated, and it is difficult to determine to what extent this occurs, and therefore difficult to secure reliable results in comparing different cases

In spite of the fact, which I have repeatedly mentioned, that absorption in these cases often does not suffer enough to explain the atrophy, it may be that the pancreas, as well as the intestine, shows reduction, and perhaps, entire loss of ferment-function We know now quite clearly that fat-absorption is sometimes good in the entire absence of pancreatic secretion, and it is quite possible that this is more largely true of protein than we have thought. Indeed, in many cases, with severe lesions of the pancreas, the nitrogen-absorption is known to be not bad This possibility of disordered pancreatic function is of particular interest in infants, for there is some testimony, though not based on very good evidence, that in the first three months or so of life the pancreas has only a subordinate rôle in carrying on digestion and absorption, while after this it becomes increasingly important Athrepsia in infants is particularly likely to begin about the third month of life, and, hence, if the above-mentioned view is correct, it becomes possible that the difficulty in athrepsia may be partly, at least, the result of failure of the pancreas to take up the large function that it should assume If the pancreas fails to do its duty, fragmentation of the protein-molecule will be still more incomplete than if the intestinal ferment only were absent. In this case, pepsin alone would be left to digest the protein sufficiently for its absorption, but in infants, at any rate, with their simple milk diet, it is probable that pepsin is capable of doing at least a very large part of this If there is any truth in the view that I have just noted concerning the development of the pancreatic function in early life pepsin must, in even normal infants, in the very early weeks of their existence, do most of the work except that carried out by erepsin

In addition to what I have mentioned it is desirable to attempt to determine whether amino-acids or peptides do escape into the circulation in these cases, or whether, on the other hand, the circulating protein of atrophic cases shows differences from the circulating protein of other cases These last points are very difficult to determine with our present methods, particularly with the paucity of material provided by the cadaver of an athreptic infant. They may be possible of solution in cases of atrophy that occur in older persons, perhaps even during life

Furthermore it is desirable to determine whether there are alterations in the ferments in the tissues that lie beyond the digestive tract

Finally, I would with an equal consideration of the

CONTROL CASES

CASE 6.—Infant of nine months, dead of general tuberculosis. Erepsin digestion experiment.

Unboiled	0.0306
Boiled	0.0112
Increase	0.0194

Witte peptone digestion. Boiled pronounced biuret, unboiled very slight.

CASE 7.—Infant of five and a half months, dead of slow starvation. (Extremely insufficient feeding by an ignorant mother, admitted moribund.) Erepsin digestion experiment.

Unboiled	0.0215
Boiled	0.0147
Increase	0.0068

Witte peptone digestion. Boiled very distinctly more marked than unboiled.

CASE 8.—Adult, died in convalescence from typhoid fever, after a long illness and extreme emaciation. Erepsin digestion experiment.

Unboiled	0.0229
Boiled	0.0117
Increase	0.0112

Witte peptone digestion. Boiled marked, unboiled slight.

HEMOLYSIS IN PERNICIOUS ANEMIA, AUGMENTED BY URINARY RETENTION

REPORT OF CASE

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An article on "Recurrent Intermittent Retention of Urine Occurring with Remissions in a Case of Pernicious Anemia"[1] attracted my attention and led me to compare it with a similar case lately observed in the medical clinic of Professor George Dock. Dr. Cunningham's case was a male, aged 47, who had well-marked symptoms, physical features and a typical blood picture of pernicious anemia. In addition he had a history of retention of urine four years before, after which he was regularly catheterized for three months. At the time of his admission he urinated every two hours and was up more often during the night. In addition, difficulty in starting his urine and dribbling were complained of. Examination revealed a hypertrophied prostate, sufficient to cause frequent attacks of retention. Cystoscopic examination showed a chronic cystitis, and on draining the bladder as much as thirty-six ounces of residual urine were obtained. Bottini's operation was performed under cocain anesthesia. In three months the patient had no urinary symptoms and his blood was in good condition. He returned because of the reappearance of the anemia one month later, and complained at the same time of urinary symptoms—namely, dribbling and difficult micturition. The residual urine had again increased. The bladder symptoms were relieved, and along with the improvement in his blood his urinary symptoms became better. In six months he had a similar attack and again recovered. Finally two years and two months after the onset another attack came on from which the patient never recovered, dying from "uremia." In these numerous attacks the lowest blood count was 472,000, hemoglobin 10 per cent., the highest 3,500,000, hemoglobin 45 per cent. The postmortem of the urinary system revealed chronic cystitis, hypertrophied prostate, dilatation of the ureters, kidneys, pelves and calices. Urinary findings at each examination were practically the same. The urine was pale, of low specific gravity and acid or neutral. There was a trace of albumin, but no sugar. There was always sediment consisting of pus, blood, and hyaline and granular casts.

In many respects the case I purpose to report herein resembles the one just outlined.

Patient.—M. L., aged 56, stonemason, American and single, came into the medical clinic on Jan. 4, 1907, complaining of numbness, stiffness of the hands and feet, diarrhea and loss of appetite.

History.—There was nothing notable in the family history. He had had typhoid at 15. He denied venereal diseases. Drank beer in moderation and smoked six pipefuls of tobacco daily. Five years previously, following exposure to cold and dampness, both shoulders became stiff, and there was some loss of power in his legs. The weakness persisted and this he noticed was more apparent on the least exertion. Diarrhea began two weeks before coming to the clinic, with from four to six stools per day. At this time he had grown dizzy and stumbled occasionally. His hands were numb and he found it impossible to button his clothes. He had had difficulty with urination for some time, but could not definitely remember the time of onset. In the early part of October he began to find it necessary to get up at night to urinate. Soon after this a burning pain at the beginning of urination and dribbling annoyed him. These symptoms became more pronounced so that when seen the patient urinated about every two hours and found it necessary to rise at least three times every night to empty his bladder. The urine was small in amount, pale yellow, and slightly turbid.

Examination.—Patient was of medium frame, skin dry, very pale, freckled and inelastic. There was a small amount of panniculus. The hair was scanty and gray. Height five feet eleven inches, weight 122 pounds. The pupils were equal and reacted to light and accommodation. The teeth were very poor, the gums were red and spongy, the tongue fissured, moist, glossy and tremulous. The mucous membranes were pale. The neck was symmetrical and the thorax of good length, breadth and depth. The clavicles were prominent. The apex of the right lung was lower than that of the left and there was relative dulness on the right. Over the dull area there was weakened vesicular breathing with prolonged and slightly blowing expiration. No adventitious sounds. Remainder of the lungs negative. The apex of the heart could neither be seen nor felt. The cardiac dulness was not enlarged. The first sound at the apex was weak but clear. The second sound was relatively louder and more abrupt. The second pulmonic was weak, distant and impure, and the second aortic was clearly heard. The pulse was full, quick, of good tension, and regular. Examination of the abdomen showed it to be pale, inelastic, walls lax and ribs and crests of the ilia prominent. Palpation negative. The prostate was enlarged, the right lobe being somewhat larger than the left.

Blood Examination.—Red blood cells, 2,220,000, white blood cells, 6,800, hemoglobin, 42 per cent. (Miescher). Differential count of 500 cells: Small lymphocytes, 40.4 per cent., large lymphocytes, 2 per cent., polynuclear neutrophiles, 50 per cent., polynuclear eosinophiles, 5.4 per cent., mast cells, 0.6 per cent., degenerates, 1.6 per cent. Many macrocytes, microcytes, poikilocytes and oval cells. No nucleated forms seen.

Urinary Findings.—24 hour specimen, 1025 c.c., specific gravity 1.017. Acid. Color pale yellow. Tests for albumin and sugar negative. The small sediment contained a few leucocytes, epithelial cells and a few round granule cells. No casts.

Fecal Findings.—The stools were small, thin and watery, brown, containing mucus in small flakes. No occult blood. Microscopically a few undigested meat fibers and starch were seen. No cells and no parasites found.

Test Meals.—These showed an absence of hydrochloric acid. Total acidity low. Rapid motility. Low peptic digestion. No lactic acid. Microscopically a few short motile rods with curved ends.

Treatment.—The patient was put on "anemic diet," consisting of eggs, raw beef and two hour liquid feeding. He was

1. Cunningham (John H.). Ann. of Surg., February, 1907.

given 10 grains of tannigen after each evacuation, a mild diuretic Blaud's pills in increasing doses, which was soon changed to Fowler's solution He soon began to improve and progressed steadily His blood became better so that at the end of a month the count was as follows (February 11) Red blood cells, 3 000,000, white blood cells, 3,600 hemoglobin, 56 per cent The differential count showed small lymphocytes, 50 per cent, large lymphocytes, 2 5 per cent., polynuclear neutrophiles, 32 5 per cent, polynuclear eosinophiles, 10 per cent, mast cells, 0 5 per cent., degenerates, 4.5 per cent Though no nucleated cells had been found before this, they were now quite numerous Normoblasts 13, megaloblasts 111 Many polychrome cells and a few stipple cells A few days later the patient noted difficulty in urination Burning sensation on passing and having to pass small amounts at frequent intervals were complained of This continued for two days, when, on February 15, it was found necessary to catheterize the patient and withdraw a considerable amount of residual urine Rectal examination at this time revealed, as has been previously described, an enlarged prostate, the right lobe particularly in this instance feeling soft. Immediately after withdrawing the urine the blood count was made. Red blood cells 1,710,000, hemoglobin 22 per cent This was the first instance that we had in this case of an exacerbation of the anemia, associated with retention of the urine. The only marked change in the differential count was an increase in the eosinophiles, which rose to 15 per cent., the neutrophiles falling correspondingly Nucleated forms were about the same as on the previous examination The patient improved during the next few days, urinated freely, and except for weakness occasioned by the anemia, felt as well as previously His blood remained about the same The red count did not rise above that made on the 15th and the hemoglobin persisted at 22 per cent The lowest red cell count was 1,040,000 On the evening of February 19, he again complained of severe pains in the lower part of his abdomen He was restless, picked at the bed clothes, attempted to get out of bed, talked continuously, and showed other signs of active delirium He had not urinated for eight hours An examination of the abdomen revealed a distended bladder extending a hand's breadth above the pubis The patient was catheterized at this time and 400 c c. of dark yellowish red urine was withdrawn Examination of this urine was as follows Specific gravity, 1 017, clear and acid No albumin, no sugar, no bile coloring matter Strong test for urobilin Sediment contained blood cells, some leucocytes and a few round granular cells Unfortunately a spectroscopic examination was not made A blood count made immediately after the catheterization showed the second enormous drop that had occurred in the course of the disease The red cells were 740 000 and the hemoglobin was 19 per cent From this time on until his death, February 23, the count remained practically the same.

Dr Cunningham, in his conclusions, argues that the relapses of the anemia brought about the "weakness of the general muscular system of the bladder wall," which "lost its contractile power and retention of urine resulted" To my mind another factor was at work in both of our cases influencing both the exacerbations of the anemia and causing in part the retention Prostatic hypertrophy brought about retention of the urine in both his and my own case, following this an absorption of the hemolysins occurred and remissions in the blood count resulted

Sudden and rapid variations in pernicious anemia have been noted under many conditions Not alone alterations in the differential count and the occurrence of nucleated showers, but changes in the red cell count and hemoglobin content frequently occur Physiologic influence and secondary infections are the most usual causes in the daily variations in proportion between mono- and polynuclear white elements Megaloblastic showers are regarded as an attempt on the part of the bone-marrow cells toward regeneration of the red cells At the same time the clinician has looked on these floods of megaloblasts as a signal, prognostic of dissolution soon to follow Diminution of the red cells and hemoglobin, slowly and with no attempt at regeneration, with slight but appreciable daily decline marks the progressive pernicious case. And *vice versa*, gradually increasing count after the ebb has been reached, with no other features than a steady rise in the count and a tendency on the part of the red elements to assume uniform shapes, signifies regeneration and convalescence. Remarkable increases in the hemoglobin and gains in the red cell count are so rare that their occurrence due to bone-marrow activity must be regarded with suspicion Usually circulatory disturbances or faulty technic explain them Sudden and distinct reduction in hemoglobin and drops in the red cell count are not so uncommon They result from a variety of influences Secondary infections cause the largest and most sudden drop in the red count. Especially is this effect seen resulting from septic infections Excitement, increased mental activity or excessive physical exercise is followed at times by such remissions There are times, however, when rapid fall in the blood content of the body can no more be accounted for than the disease itself These idiopathic changes must be closely related to the primary causes of the anemia, for it seems reasonable that a rapid hemolysis can occur only when an excess of those hemolysins that produce the blood changes are in circulation

Morris examined the urine of several cases of pernicious anemia along with the urines of other chronic and a few acute infectious diseases for hemolysins He used 10 c c of urine and 10 drops of a 5 per cent solution of blood (rabbit) which had been defibrinated and washed free from serum After incubation for two hours at 37 C and then standing at 0 C for 24 hours the specimens were examined macroscopically and spectroscopically There was positive hemolysis in all cases of pernicious anemia at various times during the examinations, also hemolysis in hypnotic urines In all other cases hemolysis was negative It is evident from this that certain substances are excreted by the kidneys in pernicious anemia that have some hemolytic action on the blood That these substances also circulate in the vessels of patients with pernicious anemia is evident from the work of Niesser,[2] Ascoli,[3] Halpern,[4] Ford and Halsey[5] and others

McCaskey[6] found in a case of typical pernicious anemia a large amount of xanthin bases which "held in a one-twentieth of 1 per cent solution made isotonic for blood exerted a positive but slow destructive effect *in vitro* on normal erythrocytes" These, he thought were in much greater concentration in the urine than in the blood

It has been disputed whether or not hemolysins were a part of the blood serum Maraghiano,[7] in 1892 showed that hemolysis in anemia was due to hemolysis of the serum rather than disease of the blood-forming organs themselves Ford and Halsey have shown that hemolysis takes place when normal blood is subjected to laked blood

Warthin[8] maintained that the hemolytic poison does not confine its effects to the portal areas as claimed

2 Berl Klin Woch chr., 1901
3 Münch Med. Wochschr., 1903
4 Berl Klin Wochschr., 1902, xxxix
5 Jour of Med Research
6 New York Med Jour
7 Congr f Innere Med
8 American Jour of M

by Hunter, but is present in the general circulation The hemolysin of pernicious anemia does not differ in kind from that occurring normally or in certain diseased conditions The difference is one of degree only" It seems evident from the above that when a retention of urine occurs in pernicious anemia that those substances or hemolysins which fail to be excreted are, in part, retained in the general circulation and, in part, reabsorbed into the body from the urinary tract That these substances may cause a hemolysis, such as was observed in this case, is plausible, and that their continued retention may give rise to frequent remissions in the course of the disease is a logical conclusion

Intermittent or cyclical hemolysis is the rule in pernicious anemia. Consequently when the poison that is normally being excreted from the kidneys is added to those already active in the circulation increased hemolysis is to be expected

Whether this substance is a part of the serum itself or a toxin circulating in the blood requires further investigation As mentioned above, there are many diseases in which a higher degree of hemolysis can be demonstrated in the blood serum than in pernicious anemia In none of these, however, could Morris[9] find hemolytic properties in the urine, unless there was a hypotonicity in the urine This is interesting in the light of certain theories that are advanced as to the cause of pernicious anemia. The view of Hunter[10] as to the cause of pernicious anemia—that the small intestine is the site of a specific infection whose toxin acting in the portal system alone causes hemolysis—needs further explanation The recent work of McCaskey,[6] though alluring, is inconclusive, in that only one case of the kind has been examined Moreover, we do not know the amount of xanthin bases that may be present in other diseased states, nor the amounts that may be excreted by a healthy individual

Another question that presents itself is whether or not all the erythrocytes that are destroyed at the periods when the cyclical hemolysis occurs undergo dissolution in the spleen and other hemolymphatic structures? It would seem as if hemolysis could occur in any vascular channel of the body, providing a hemolysin or toxin were present This would liberate blood-coloring matter and, as stated above, the laked blood could exert an additional hemolytic action Whether the hemoglobin from the blood cells, that could be broken down in this manner in the general circulation, is first carried to the liver, spleen and lymph glands, and then excreted as urobilin or whether it is excreted directly after having been changed to hemochromogen, has been investigated, but without uniform results If the hemolysins act in the general circulation, it is probable that the red cells are disposed of in both ways It must be remembered in this connection that the larger part of the blood passes through the portal system, and then through the liver and spleen, before it reaches the kidneys through the systemic circulation

These two cases have suggested new problems that might be undertaken with profit—the constancy of hemolysins in the blood in pernicious anemia and in the urine, together with their relation both qualitatively and quantitatively, the absorbability of these substances, and the presence of products of hemolysis in the urine There is need also of a method for estimating hemolysins whereby uniform results may be obtained.

9 Morris American Jour of Med. Sci. 1904 p 1026
10 Pernicious Anemia.

THE FIELD WHEREIN THE WORK OF THE SURGEON APPROACHES THAT OF THE PHYSICIAN

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Cases in which a reasonable doubt exists as to the propriety of an operation are met sufficiently often to warrant their consideration

THE SURGEON AND THE PHYSICIAN

The training, character of practice and experience of the general surgeon differ in a measure from those of the internist—their observations being made from a different point of view, but their conclusions, when based on all of the evidence, should agree

The experienced surgeon possesses an advantage from his opportunities to inspect and to palpate the living tissues and to study the pathology in its various degrees of severity and stages of progress and to compare such findings with the pre-operative symptoms Repeatedly thus to study the symptoms before operation, and to check up the findings revealed by the exploration, contributes in the most practical way to the development of his judgment

The relatively greater experience of the internist in his study of chest lesions is an aid to his interpretation of upper abdominal diseases, and from greater refinement in percussion, more accuracy in estimating blood pressure, and more experience in making blood examinations there accrues valuable clinical data for his consideration

Beyond the question of diagnosis there is room for team work in planning the treatment. Some good surgeons develop into therapeutic nihilists, and some good physicians are tardy in recognizing the limits of medical therapy Their combined efforts toward reaching a humanly correct diagnosis in the obscure case needs to be supplemented when an operation is begun by the utmost exercise of judgment in deciding on how much to do and in determining what supplementary aids will be most valuable in the after management

AIDS TO SURGERY

At this period it is not necessary to refer to certain scholastic clinical pictures in illustration, but they afford a good opportunity to introduce borderline cases, for example, plastic repair in gynecology, when done for the more minor lesions, must not be expected to correct an existing gastroptosia or to benefit an atonica gastrica or to cure what is often the major feature of the case, malnutrition depending on secretory deficiencies or mechanical displacements of the digestive organs, with a pretty generally co-existing mucous colitis

If lacerations need repair, and the proper anatomic position of the uterus requires surgical restoration, let this be accomplished neatly, selecting that form of surgical replacement indicated in the particular case, but the aid of an abdominal support, and particularly a study of the feeding of the patient will probably outweigh the operative steps in contributing to complete convalescence in this class

The wishes of the patient or of the family must be final in deciding on an operation, but ours is the duty to mold opinion, and particularly must there be reserved abundant latitude to exercise our judgment as to the extent of surgery done, based on the exigencies of the case and their relation to the powers of resistance

A promise to do everything that is necesary in order to avoid a second operation should not be made, as this might clearly invoke unjustifiable risks to life, but permission should be given the surgeon to correct a co-existing lesion uncovered by the exploration when the risk of such procedure is but reasonable in degree In weighing these problems, the surgeon will have much satisfaction if the support of the attending physician has been expressed in council.

UNUSUAL CLINICAL TYPES

Unusual expressions of pain often require most faithful efforts for correct interpretation, e g, a condition so remote from the pelvis as a weakened anterior arch of the foot may produce lumbar or pelvic distress from faulty habits of walking or standing In verification complete relief has been seen to follow an appropriate support for the transverse or for the posterior arch of the foot

On the other hand it was once my experience to investigate carefully the cause of a persistent and practically disabling pain radiating from a point near the middle of the crest of the ilium, for which the patient was wearing an elevated shoe The local symptoms, however were so impressive of an abscess, probably having origin from a deeply situated appendix, that an operation was advised and tardily accepted A small abscess with thick protecting walls surrounded the tip of an appendix which lay almost entirely behind the peritoneum It was clear that this abscess had existed for a considerable period The high shoe has given no relief In relating this case to a well-known orthopedic surgeon, he rejoined that he had once been called on to treat a case of sacroiliac disease, for the relief of which an ovary had been previously removed by a gynecologist

Recently the surgeon has been given greater latitude by the physician in dealing with cases wherein the sufficiency of the kidney has been in question, but this lesson, however useful for the future, has been learned at the expense of overdoing decapsulation

THE REAL BATTLE GROUND

It is in the proximal right quadrant of the abdomen that the greatest difficulties in diagnosis are encountered The anatomy is complex functional activity is great, and a pathology beginning in one organ involves the contiguous tissues producing interdependent symptoms difficult to analyze, and the costal arch interferes in a measure with the usefulness of the surgeon s most reliable sense—palpation

The outlines of the stomach are easily demonstrated, its mobility readily tested, and constrictions at the pylorus are easy to interpret—ulceration recognizable from fairly definite symptoms or by repeated examinations of the dejecta for blood, but infections extending through the duct of Wirsung to the pancreas or through the common duct to the liver cell and gall bladder are responsible for a pathology so variable in extent and degree that in my opinion there is opportunity for the exercise of the best talents of both the physician and the surgeon in making a diagnosis and there is need for supplementing the surgical treatment with therapeutic aid of a medical and dietary type

Gallstones are incident to long-standing low-grade infections They become recognizable from influences which are mechanical and their removal is generally called for by a condition so excited The removal of the gallstones is essential for relief when they have become mechanically troublesome, but the real benefit comes from the drainage of the bile ducts and liver cells If we admit that drainage may be influenced favorably by dietary and medical aid by acting on the gastroduodenal mucosa, there remains at least a preventive field for the internist

The final word concerning gallstones is yet to be spoken. That they are common, that they may exist without symptoms, that they may develop, be evacuated through the ducts and bowel and not re-form, at least for a period of years, is accepted The last analysis, however, as to their bearings in heightening an infection their relation to malignant disease, the amount of pancreatic disease secondary to their existence, and particularly their differentiation from diseases in contiguous organs are the problems remaining for further investigation and more complete solution

ILLUSTRATIONS

In 1900, during convalescence from an operation for pelvic repair, Mrs C suffered from an acute biliary attack, with rigor, fever and jaundice An examination of the stools revealed gallstones and an operation for drainage of the gall bladder was considered, but not thought to be urgent No further attack was experienced and about the middle of 1906 it became necessary to remove an acutely inflamed appendix at which time the gall bladder and ducts were carefully examined There was an adhesion of omentum to the fundus of the gall bladder, but the gall bladder was normal in size, easily emptied on pressure, no stones existing in the ducts This case illustrates immunity for six years after a clear attack of gallstone colic and their recognition in the stools

In 1902 at the termination of a difficult removal of a large, adherent multilocular ovarian cyst, the gallstones were detected in the gall bladder The condition of the patient did not warrant their immediate removal This patient has been under observation since that time and has had no symptoms referable to the bile tract

In disease of the upper right quadrant of the abdomen four conditions primarily and in a major degree require the care of the diagnostician (Richardson) These are gallstones gastric or duodenal ulcer cancer of the stomach and functional diseases Of these functional diseases represent by far the greater number of cases Chronologically, malignant diseases will appear latest and gallstones next but the age can not be regarded as important in determining the probabilities, at least between functional diseases, gallstones and ulcer More important is the character and degree of pain the period of its occurence the amount of constitutional disturbance and its amenability to medical and dietetic treatment

In gallstone pain as in the pain of extra uterine pregnancy there is a wide range as to degree but it is usually found that some particular attack has been sufficiently severe as to call for some prompt measure of relief and while these attacks of pain are thought to be provoked by dietetic indiscretion yet the pain will be found to be rhythmic in its relation to the ingestion of food this is the rule in functional disease

[illegible]

In gallstones it is well to remember that pain [illegible] present in a minority of cases probably [illegible] fifth and it is usually important to [illegible] its presence strongly suggests [illegible]

pernicious anemia, in hypertrophic cirrhosis and in syphilis of the liver, not to mention that found in primary malignant disease of the ducts, must account for a number of cases of apparent jaundice, even though the tint in these diseases is, in a measure, characteristic

CANCER

Unfortunately, malignant disease of the stomach has no early pathognomonic symptoms The usual location for the early development of the malignant disease is the cicatrix of an old ulcer, but its extension involves the submucosa primarily, and there is no ulcer to produce pain, and insufficient deposit to produce stricture or to impair the mobility of the organ in the early stages, therefore, recurrent spasm is not an early symptom It is a disease, therefore, which we must diagnose largely from symptoms that are unobtrusive, but which fail to yield to the treatment which would favorably influence functional diseases or ulcerative changes in a reasonable time Pain is not an early symptom, and to wait for vomiting of blood, great loss of weight, palpable tumor and cachexia or for the eyelet of the stomach tube or the test meal to reveal characteristic cells or, finally, to place any substantial dependence on the presence or absence of acid, is to clearly pass the period when curative treatment is possible

Among the less frequent affections in the upper right quadrant of the abdomen, it has been my experience twice to encounter tubercular peritonitis, locally and primarily involving the peritoneum about the pylorus and gall bladder In one the symptoms resembled malignant disease of the pylorus on account of the mechanical obstruction and loss of weight In the other the symptoms were those of cholecystitis, which recovered after drainage of the infected peritoneum about the gall bladder

Supra-umbilical hernia as a cause of pain, referable in my experience to the neighborhood of the left costal arch and uninfluenced by a treatment directed toward the digestive organs, yet sufficiently severe as to be at times disabling on account of the increased pain following physical exercise is frequently overlooked This doubtless is due to the fact that it is comparatively uncommon, it may exist without causing any symptoms, and hence might be regarded as an innocent lesion, and the protrusion may be so small as to escape any except the most painstaking research In the majority of cases it requires operative treatment for its relief Occasionally it will yield to the accurate pressure of the adhesive plaster-cork support

In the consideration of these diseases the degree of pain, the period of its occurrence, the direction of its radiation, its amenability to treatment, the amount of constitutional symptoms, the feel of the overlying muscles in the hand of the surgeon, the question of probability, and the ability to think of the unusual diseases which might resemble the clinical picture before us, must be weighed At the same time the individual must be studied and his method of narrating his symptoms analyzed for the purpose of eliminating what is unimportant, yet to cross-examine on what is important, recognizing the symptoms to be typical or atypical before the final analysis is made

Naming of Carbon Compounds—Esters are compounds in which the hydrogen ions of acids, organic or inorganic, have been replaced by organic radicles, thus acetic acid, CH_3COOH, and ethyl alcohol, C_2H_5OH, form $CH_3COO(C_2H_5)$, acetic acid ethyl ester or ethyl acetate.—*Pharm Rev*, August, 1906

THE STATE BOARD AND THE COLLEGE DIPLOMA *

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One of the most interesting and significant features in the development of modern medical education is the relation between the state medical examining and licensing board and the medical school As has been shown elsewhere,[1] there is reasonable ground for the belief that the state board sprang only from a soil mulched with the product of the decadent medical school To put the point more bluntly, had the medical school done its full duty, there would never have been need of the state board, for the diploma of such a school would have satisfied all registration requirements It must be conceded, therefore, at the very outset, that the state board begins its functions with a natural, not to say genetic, prejudice against the medical school *per se*

In the prehistoric days of the profession, before the rise of the schools, its neophytes were the accredited apprentices of recognized practitioners With the evolution of the healing art, it was found that mere empiricism was but a poor guide, that underlying all vital activities are certain fundamental laws and principles, certain necessary sequences of cause and effect, which, mastered, give man a certain more or less complete control over the ills to which he is heir The knowledge of these fundamental laws and principles, of these sequences of cause and effect, constitutes the science of medicine It was early apparent that no one man, busied with the claims of his patients—the more numerous, the greater his skill and fame—could impart to his student that full knowledge which would make him the worthy bearer of his preceptor's cloak Hence it came about that two or three, or more, combined to give their students the benefit of their combined experience Had each one but covered the same ground, the gain would have been merely quantitative, not qualitative As elsewhere, throughout the organized world, development is marked by a differentiation of labor and a consequent specialization of function The evolution of the physicist, the chemist, the anatomist, the physiologist, the pathologist, forms but a part of the evolution in the general history of civilization As time went on, the medical profession came to be recognized as one of the learned professions, and its privileges and emoluments as something to be sought in themselves The diploma, which conferred on its holder a right to these privileges and emoluments, came to have a value which tended to overshadow the duties which it imposed, and then, by easy stages of degradation, it became in many instances the mere commercial product of the diploma-mill Then, and only then, did the public, recognizing the utter inadequacy of the diploma in itself, as a guarantee of capacity and ability, seek to protect itself by interposing between itself and the body which confers the diploma a disinterested board whose function it is to test the qualifications of the applicant for licensure

The powers of these boards would seem to be sufficiently recognized and established, their duties are evolving with the progress of events It will, perhaps, be universally admitted that some evidence of preliminary training should be submitted before the candidate is admitted to examination by the board, and that hitherto

* Read at the Sixteenth Annual Convention of the National Confederation of State Medical Examining and Licensing Boards Boston June 4 1906.

1 THE JOURNAL June 3 1906.

the diploma has been at least the most convenient form of such evidence. Owing to the conditions just outlined, it has become necessary to discriminate between these diplomas and, in some instances, against certain institutions granting them. An indication of the former need is seen in the unanimous opinion of the Supreme Court of the United States, delivered Jan. 14, 1889, in the case of Dent *versus* the State of West Virginia Speaking of the qualifications of the physician, Mr Justice Field said

> Reliance must be placed on the assurance given by his license [not diploma] that he possesses the requisite qualifications

Of the latter need there is evidence in the laws of the various states, wherein schools are referred to as of "good standing," "recognized," "reputable," etc In the light of Judge Toney's significant definition (Nelson *versus* State Board of Health of Kentucky) it may be argued that the word *reputable* best suits the needs of the state board and should find its place in every licensing act Says Judge Toney

> The word "reputable," as used in the statute, applied to a college—an institution of learning—has a different meaning from what it has when applied to an individual When applied to an individual, the adjective "reputable" has reference to his moral character, to his character or reputation as an honorable man, *i e*, to his integrity and good character, but when applied to a college, the word *reputable* has reference to the extent of its course of sessions, that is, to the period of study required for graduation—to the thoroughness of the education required at such college—to the thoroughness of the course or courses of science prescribed and taught in said college, and to the capacity and qualifications of the teachers therein, and to the standard of scholarship and proficiency in said sciences required of the students as a condition precedent to the issuing of diplomas to them as graduates thereof

Again, said Chief Justice Strahan, of the Supreme Court of Oregon (William Barmore *versus* the State Board of Medical Examiners)

> As a part of the current history of the times, and as an aid in arriving at the legislative opinion, when there were different kinds of colleges authorized by the laws of the states in which they were located, in which there were pretended annually to be delivered full courses of lectures and instruction on the arts and sciences professed to be taught, that were not reputable, because they graduated students for money frequently without regard to scholarship, a diploma from such an institution afforded no evidence of scholarship or attainments of its holder It was a fraud and deserves no respect from anybody, and it was against such diplomas the law was intended to protect the public, and, therefore, required the colleges to be *reputable* Whether a college be reputable or not is not a legal question, but a question of fact.

Once more, said Judge Given ("The Eclectic College Case," Supreme Court of Iowa, May, 1893)

> The standing of the college, as contemplated by this statute is rather what the college is in respect to the thoroughness of its courses than what it is reported to be

Unfortunately, what a college is is not always to be learned with certainty from its official publications In a paper read March 19 1906, at the sixteenth annual meeting of the Association of American Medical Colleges, one of the delegate members said

> Until the medical colleges of this country can bring themselves to tell the truth in their catalogues they must not expect to receive any great confidence

At the same meeting another delegate said

> The degree of doctor of medicine does not always represent what it should represent The very existence of examining boards is evidence of the fact that all medical colleges can not be relied on. There are men engaged in educational work—in secondary education and in professional education—who must be watched. That being the case, the examining board comes into existence, and the examining board needs information.

And now a few illustrations, the data furnished are drawn from material, most of it in print, and all of it at the disposal of this conference

Last fall the secretary of the State Board of Colorado sent a letter of inquiry as to the status of the Eastern University of Washington, D C , with this was enclosed a wretchedly printed announcement of the institution aforesaid, which proposed to give full courses in the arts and sciences, in theology, medicine, dentistry, pharmacy, etc. No such institution was registered in the office of the commissioners of the District of Columbia None of the faculty was to be found in the city directory, indeed, no local habitation was mentioned in the printed announcement. The matter was at once placed in the hands of the superintendent of police, who detailed a detective to look into it Investigation developed the fact that all mail addressed to the Eastern University of Washington, D C, was delivered at the office of an attorney in the city who, it is understood, makes a specialty of incorporating organizations of various kinds under the laws of the district, and by him forwarded, unopened, to a postoffice box in Philadelphia Again no local habitation was given and the sumptuous lecture halls and well-equipped laboratories of this institution were—and still are—hidden under the ample cloak of "Uncle Sam's" mail The next inquiry was made of the General Postoffice Department, whose inspectors chased this specter out of the City of Brotherly Love and into New York and—back to Philadelphia! Repeated inquiries have failed to bring any more definite information. The health officer of the district, who was secretary of the Board of Medical Supervisors, the police department of the National Capital and the Postoffice Department of the United States Government seem alike unable to answer questions No doubt, more than one member of this confederation has asked where and what is the Eastern University of Washington, D C While there is little doubt that any but the most unsophisticated would give credence to the pretensions of such a mere paper diploma-mill, the fact that it can so freely use the mails and so easily escape detection and localization is significant

If there be any city in the country where a night school of medicine might find a reasonable excuse for existence it is, perhaps, the city of Washington The offices of the several governmental departments swarm with ambitious but underpaid clerks, many of whom work at their desks from 9 until 4 30, and many others seek to profit by the much-vaunted educational advantages of the National Capital from 4 30 until 9 Whether or not it is possible thus to serve two masters, without slighting the work of one or the other, it must, in sheer justice, be said that many able and capable men have entered the profession by this route To-day, however, when the medical curriculum cries aloud for more time and for the undivided attention of its followers it is more than doubtful whether such a combined course can be followed either with safety or with profit Could the medical course in such a school be extended to five or six years the last year being devoted unremittingly to clinical work and of course in the daytime but little criticism could arise Competition, however, [illegible] that the medical school which [illegible] M D in four years at most would [illegible]

On the other hand the [illegible] the

night school must be abolished, and in answer to the pressure thus brought to bear we find in one catalogue this rather unique announcement in bold face type

TWO COURSES OF LECTURE LABORATORY AND CLINICAL WORK WILL BE GIVEN DURING THE YEAR, THE ONE BEGINNING DAILY AT 9 30 A M, THE OTHER AT 4 30 P M THE STUDENT MAY SELECT EITHER COURSE

It has been impossible to secure a printed schedule of these courses, for the reason, it is understood, that none has been printed! On the bulletin board, however, we may see lectures scheduled at 8 a m and then—a vast and significant vacuity until the mystical hour of 4 50 p m True, in the first year, the anatomic laboratory is open from 9 to 12, the physiologic laboratory, thrice a week, and the chemical laboratory, twice a week, from 2 20 to 4 50 In the second and third years there is pathology from 1 to 4 thrice weekly, in the third year there is physical diagnosis from 1 to 2 twice weekly, and in the third and fourth years a recitation in gynecology at 1 o'clock on Thursdays, but the bulk of the work is crowded, in each year, between 4 50 and 10 30 This school did not take kindly to the rule that preliminary education is to be passed on by the state authorities, or at least not by the faculty of the medical school Its dean asserted with some warmth that, of course, his school would reserve the right to pass on the qualifications of its own matriculants

In reviewing the obstacles to further progress, in the cause we here represent, the chairman of the Council on Medical Education of the American Medical Association said last year

A second obstacle, and one of great moment, is found in the medical colleges which are conducted as private corporations There can be no longer any excuse for the existence of a medical school which is conducted by a body of men for profit It is only necessary to state the demonstrated fact that it costs more to furnish a student with a medical education than he pays for fees to show conclusively that a school supported solely by the fees of the students, and which pays a profit to its owners, is doing poor work and has no warrant for existence Fortunately, with the increase of requirements, especially for preliminary education, these medical schools will be forced either to seek endowment or absorption by universities which will enable them to do acceptable work, or else they will be condemned to extinction by the law of the survival of the fittest

Let us consider, for a moment, a school of this type The connection between a certain other university and its medical school might be called a *mariage de convenance* The president of the university is, *ex officio* president of the medical faculty, but the latter is practically autonomous, its treasurer disburses all funds on the order of the faculty or its duly authorized committees and these committees are appointed by the vice-president who is, of course, a medical man There is no endowment and the dividends of the professors are determined by striking a balance between the total fees received from students and the total running expenses of the school

In THE JOURNAL you will find what was said to be its curriculum "in force during the session of 1903-1904" A few stray items are not only illustrative but interesting In the first year we find twenty lectures and twenty hours of laboratory work assigned to physics There was not then, and there is not now, a physical laboratory in this medical school, nor did the class have any laboratory work at all in physics Seventy-five lecture hours are assigned to physiology, the class actually had fifty-two recitations Forty hours' laboratory work are assigned to physiology in both first and second years As a matter of fact there was no physiologic apparatus worthy the name until the opening of the following session and absolutely no laboratory The first class to have laboratory work in this school had twenty-five hours for each student during the session of 1904-1905, and the equipment consisted of two scant sets of the Harvard physiologic apparatus, increased in the summer of 1905 to eight sets

If a committee of this confederation will take the time and trouble to compare the data given in the annual "Educational Number"[2] of THE JOURNAL with the catalogues and lecture schedules of some of these institutions, it will find some "mighty interestin' readin'"

Let us see something of the quality of the output of such a school as shown by a few extracts from examination papers

The red blood cells, through their property of holding in combination oxygen for the nutrition of the body, carrying it to every part of the organism from the air cell walls of the lungs and returning carbon dioxid constitute the external respiration

On the function of the vasomotor nerves, we have this statement

The pressure is increased or diminished by thease nerves—the nerves are a part of the symphetic nervous system and have their center in certain ganglia situated on each side of the spinal cord in the main chain of the symphetic system.

Foods may be absorpted in any portion of the alimentary canal after dijestion but the great majority enter the blood through the walls of the stomach and the small intestine They enter as simple sugars, the starches having undergone a hydrolytic process, or as peptones and albiminoses, as inorganic salts and fats

This is from a graduate of 1903, though you will not find his name on the printed commencement program of that year, and he is to-day unable to pass the local board of examiners

By consulting the reports published in THE JOURNAL since Jan 1, 1906, you will find there recorded to the discredit of this same institution four failures in Connecticut, three in the District of Columbia and one each in California and Maryland Last spring, out of a class of twenty-seven students of this school, fourteen were haled before the faculty for cheating in one of the final examinations The commencement program shows that there were sixteen graduates in June The "Announcement for the Session of 1906-1907," just issued, states that the degree of M D was conferred on twenty-five candidates in 1905, there is no hint as to how they were distributed throughout the year

But why go further into details, which could be multiplied *ad nauseam* and probably from a much larger number of schools? It must be apparent that, especially in the unendowed schools, this condition is practically a commercial necessity In order to pay dividends to the members of the faculty, these schools must graduate their matriculants It is devoutly to be hoped that the newly aroused public sentiment, which is seeking to purge the atmosphere in the financial, political and social worlds, will permeate the professional world as well Without the aid of public opinion, which is, after all, the court of last appeal in this country, we can do little or nothing Meantime, however, we can at least be honest among ourselves We know that the 4 000-hour schedule, over half of which is devoted to clinical and laboratory work, requires an equipment and personnel not to be found in these institutions We

2 THE JOURNAL A. M A Sept 21 1901 Sept. 6 1902 Aug 15 1903 Aug 13 1904 Aug 19 1905 Aug 25, 1906

know, if from nothing else than the printed proceedings of its recent annual meeting that even membership in the Association of American Medical Colleges is not a sufficient guarantee of good work well and conscientiously done

Better things will come, not through fear of the occasional visit of the peripatetic inspector, whose inspection must, of necessity, be hurried, superficial and all too brief Better things will come only when the general sentiment is aroused by a general knowledge of the true state of things We all know well where these desert spots are located on the educational map Publicity is coming to be the very generally recognized antitoxin for the cancer of fraud The comparative tables published in THE JOURNAL, together with the weekly reports of failures before the several state boards, can not but have a salutary influence

But there is still another side to this question Until the state boards be raked out of the muck of politics, until their examinations be raised above the mire of catch questions and mere memory tests, until these examinations be genuine tests, not of mere learning, but of knowledge, of capacity, of ability, of character they will, some of them, be no more *reputable* than some of the colleges of which we have been thinking

1841 Summit Place

CONTRIBUTION TO THE STUDY OF ERYTHEMA INDURATUM (BAZIN) *

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Besides those dermatoses which are known to be of tuberculous origin, like lupus vulgaris, tuberculosis verrucosa cutis and scrofuloderma, there are to-day numerous other skin lesions regarded as closely related to tuberculosis, if not entirely of tuberculous origin One of them, lichen scrofulosus, the older Hebra regarded as associated with tuberculosis He found that 90 per cent of patients so afflicted were youthful individuals, with cervical and other kinds of lymphadenitis, periostitis, caries, necrosis, or affected with ulcerating scrofulodermata, symptoms which are characteristic of what we call "scrofulosis," making the name of lichen scrofulosus a proper one In some inveterate cases of this disease acne-like lesions appear with or without pus formation Hebra called them acne cachecticorum He found it associated with a moist or dry seborrhea, causing the so-called pityriasis tabescentium A third affection brought by him in connection with tuberculosis is chromophytosis It appears with predilection in those phthisical patients who are affected with seborrhea and hyperidrosis

TUBERCULOSIS AND CUTANEOUS DISEASES

A group of other skin affections more or less closely allied or even identical, but known under different names, have of late been brought into the domain of the octopus tuberculosis These are folliculitis exulcerans (Lukasiewicz) or hydroadenitis suppurativa (Pollitzer) Kaposi's acne telangiectodes Barthelemy's acnitis and folliclis, known also as papulo-necrotic tuberculides or necrotic granuloma (Johnston's) The sarcoids of Boeck, the pityriasis rubra [illegible] Besnier's tuberculous [illegible] angiokeratoma [illegible] much contested lupus [illegible] and keloid are regarded as associated with tuberculosis The erythema induratum Bazin is in a manner a very important [illegible] group, called by Darrier *tuberculides* [illegible] The fact that the important group of [illegible] due to autotoxins of gastrointestinal or [illegible] led observers to assume that the enumerated group of skin lesions may also be of endogenous origin This hypothesis was supported by bacteriologic as well as histologic findings

It is interesting to follow the evolution of this group of tuberculides as derived from the classical tuberculous affections of the skin The grouping of seemingly different [illegible] forms into a system of common etiology is at first [illegible] surprising While lichen scrofulosorum, acne cachecticorum, as mentioned before, were thought to be associated with scrofulotuberculous taint, the real import of such a connection could at that time only be surmised, but not determined The histologic researches of Jacobi,[1] who found bacilli in his two patients and later of Gilchrist,[2] who found histologic features in lichen scrofulosus identical with the structure of the miliary tubercle, also Sack,[3] Boeck's and Hutchinson's[4] investigations, finding the same element in the disseminate form of lupus erythematosus, and finally the researches of Hallopeau Darrier,[5] Brocq[6] and others gave the impetus for further studies in this line

We must look on the tuberculous taint as a predisposing cause or, rather as a favorable culture medium for the acquisition of different skin lesions Unfavorable circulatory conditions in their wake may produce lupus pernio or angiokeratoma But there certainly must be a more intimate association with tuberculosis in such lesions in which, although the bacilli have not been found histologic examination revealed tuberculous features These are folliclis, Boeck's sarcoids, lupus erythematosus, etc In a series of other lesions like lichen scrofulosus, Jacobi and more recently Wollf[7] have demonstrated tubercle bacilli, while Haushalter,[7] Pellizari and others have reported positive inoculation results Again in erythema induratum, although bacilli could not be demonstrated, yet Thibierge and Ravout,[8] also Carlé,[9] succeeded in obtaining positive results by inoculations

These different results gave rise to two kinds of hypotheses as to the origin of these lesions. They are held to be due either to the toxins of the bacilli, located somewhere in the body, or to the bacilli themselves, dead or alive, which are carried to the skin by the blood current and there act as a morbific factor The former are aptly called toxi tuberculides and the latter bacillituberculides

REVIEW OF LITERATURE AND PATHOLOGY

It would exceed the limits of this paper to analyze the abundant literature on this subject Briefly said, the theory of toxi tuberculides has its main representative

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* Read in the Section on Cutaneous Medicine and Surgery of the American Medical Association at the Fifty-seventh Annual Session June, 1906

1 Verhand d Deutsch. Derm. Ges Third Congress 1891 p 62
2 Johns Hopkins Hosp. Bull., 1899 p. 84
3 Monatsch. Pract. Derm., p.
4 Arch Derm. and Syph.,
5 Annal Derm. et Syph.,
6 Annal Derm. et Syph.,
7 Cited in Mracek's
8 Annal Derm. et S[illegible]
9 Lyon Médicale 1901

in Klingmuller,[10] who supports his contention with the fact that injection of tuberculin has caused the appearance at the point of injection of lichen scrofulosus lesions and emphasizes his hypothesis by the lack of tubercle bacilli in the lesions, their acute onset, benignant course, discrete appearance, spontaneous involution and non-inoculability on animals

In 1890 I saw such lesions at Schwenninger's clinic while he and Buzzi were experimenting in the early days of Koch's tuberculin At the same time I also witnessed the so-called local and general reaction take place in established cases of lichen scrofulosus, also in some cases of lupus erythematosus Unfortunately with the disappointment at that time to find a "sure cure" in Koch's great invention for all cases of phthisis, gathered at Berlin in midwinter, these experiments were not pushed and were forgotten In contradistinction, Mracek[11] holds tuberculides to be bacillary tuberculoses of hematogenic origin and fortifies this contention by the demonstrations of bacilli and positive inoculation results cited before That the tuberculides as well as the classical tuberculous affections of the skin are both of hematogenic origin, with the exception of the inoculated forms *per extra,* is an attribute common to both Neither does the inability to demonstrate the tubercle bacilli in the tuberculides vitiate against their being of tuberculous origin Furthermore, we know how difficult of demonstration they are even in true tuberculosis and how rarely we succeed in inoculating experiments From all these conditions common to both forms one can perceive that the class heading of tuberculide or tuberculosis of the skin is an arbitrary one Among these tuberlides, erythema induratum Bazin stands in its relation to tuberculosis about third on the list, being preceded by lichen and acne scrofulosus and the papulonecrotic tubercle In about more than half of the reported cases it was proven associated with tuberculosis In extremely rare instances the bacilli were found in the lesions, especially by Wolff In other instances inoculation on guinea-pigs proved positive (Thibierge and Ravout,[8] C Fox,[12] Carlé[9] and Jadassohn[13]), while in other cases the tuberculin test in the patient proved positive (Mracek,[11] Mantegazza,[14] Hartung and Alexander,[15] Sollner[16] and myself) Histologic and bacteriologic examination also show different opinions Audry[17] regards it as non-tuberculous, Leredde,[18] Thibierge and Ravout[19] hold it to be of tuberculous origin The latter demonstrated the main changes in the vessels endothelial proliferation almost to the point of occlusion, giant cells with peripheral nuclei and numerous epithelioid cells

One of the most constant findings is the atrophy of the subcutaneous fat tissue into large cysts and transformation into connective tissue The clinical picture of erythemia induratum is well characterized Bazin[20] describes it as occurring in red hard nodes, paling at compression tough or doughy to the touch and extending into the subcutaneous tissue. The formations do not itch and are only slightly tender on pressure The affection is localized with predilection on the legs, anteriorly, on the calves and laterally It is more frequent in girls than in boys Neither Bazin or Besnier[21] nor recently Jarisch[22] alludes to any changes taking place in these nodes They describe them as undergoing absorption

Conditions became somewhat confused when Hallopeau and Leredde,[23] Hutchinson,[24] C Fox,[12] White[25] and others reported ulcerating cases which greatly resembled scrofuloderma ulcerosum Doubtless many cases of the latter have been taken as erythema induratum and *vice versa* A non-ulcerating subcutaneous scrofuloderma occurring in young people and occupying the lower extremities is, indeed, apt to be confounded with the node of erythema induratum I venture the opinion that these formations are so closely allied to each other that neither clinical nor histologic or bacteriologic differences can hold them apart without diagnostic artifices Even the ulcerating form of erythema induratum has many similarities with ulcerating scrofuloderma, although I admit that the caseating undermined reactionless scrofulogummata with their extensive skin destruction will permit of some differentiation especially when it started from a lymph gland and much more so when on other parts than the lower extremities

The localization of the lesions on the legs may be regarded as the classical feature of erythema induratum Sluggish circulation, impaired *vis a tergo,* are the main causes of its appearance there and also of lupus pernio or simple pernio so frequently accompanying this trouble While the disease almost exclusively affects females, yet in rare instances it has also been found in men, and, although it is most frequently met in adolescent girls and young women, yet of late it has been found in older women also Johnston[26] found it in association of what is called to-day papulo-necrotic tubercle on the hands and forearms He calls these affections paratuberculoses

DIAGNOSIS

The diagnosis of erythema induratum Bazin has in a great measure been alluded to previously, out of which the picture of the disease can be construed without marked difficulty These are the salient points formation of subcutaneous deep-seated nodules, more easily recognizable by touch than by sight They develop into hard deep-seated indurated nodes, not adherent to the skin at first, but becoming so later The skin is at first purplish, then as the nodes become larger and work toward the surface it changes into a dull violaceous hue In size they occur from that of a cherry or even double its size They also occur on both sides of the Achilles tendon Their cause is eminently chronic, their development and behavior tardy and of slow activity In those rare instances when they break down, necrosis sets in on the summit of the node in one, rarely in several places, attended by a scanty seropurulent discharge The final scaring and pigmentation is then not so pronounced as that of an ulcerous scrofuloderma

ETIOLOGY

As regards their etiology, the association of erythema induratum in half of the cases with the tuberculous

10 Cited in Mracek s Handb d. Hautkr 1905 p 203
11 Handb d. Hautkr, Wien 1906 iv p 266
12 Brit Jour Derm., August, 1893 p 225
13 Correspbl. f Schweiz Aerzt. 1899 p 620
14 Annal. Derm and Syph. 1901, No 6
15 Arch. Derm and Syph., 1902 lx Med. Centrtg 1904 iii Arch. Derm and Syph. 1904 lxxi, Nos 2 and 3
16 Monatsh. pract. Derm. 1903 xxxvii p 545
17 Annal Derm and Syph. 1898 p 209
18. Ibid. 1898 p 893
19 Ibid. x p 513.
20 Leçons sur la Scrofule 1861 p 146 and his other Leçons 1862 and 1868
21 Annal Derm and Syph 1889 p 25
22 Die Hautkr Wien Hölder 1900 p 115
23 Dermatologie" Paris 1900
24 Smaller Atlas 1896
25 Jour Cut and Gen Urin Dis 1894
26 Ibid July 1899 p 311

taint, its occurrence chiefly in women sometimes also affected with circulatory disturbances, has been alluded to In more than 50 per cent of cases the tuberculin test proved positive To reconcile this etiologic discrepancy, Whitfield[27] in 1900 and again in 1905 asserted that there exist two well characterized types of the affection a tuberculous and a non-tuberculous The former, attacking young women, is of an indolent character and presumably due to the living tubercle bacilli, the latter, occurring in middle-aged women affected with circulatory disturbances, is of a rheumatic nature, more painful, prone to break down and not allied to tuberculosis

CASE REPORT

The following is the history of my case

History—Mrs M. M, aged 26, Russian, married, has no children, no history of lues, but has mitral trouble A nephew has a tuberculous taint

Nine years ago, in *winter* of 1896, she noticed a lump on the inner aspect of the left lower leg She was given a salve, which, in the language of the patient, "took out the inflammation" The lump eventually disappeared In the meantime, however, several others appeared, one on almost the same spot and another on the right leg All of them disappeared

Fig. 1—Interstitial connective tissue of the subcutaneous fat showing hyperplasia new formed connective tissue and new lymphatics

in May 1897 In the winter of 1897 lumps appeared again in about the same region but not in the same situation They disappeared in the summer of 1898 For five years no recurrence took p[illegible] when in November of 1904 lumps again appeared to the right and left of the Achilles tendon of the left leg and [illegible] half of the right Patient could hardly walk and ha[illegible] at home for a week. All lesions disappeared in M[illegible]

In Novemb[illegible] [illegible]nt allege she left the house well and in walki[illegible] [illegible] rushing painful sensation in her right leg [illegible] hed home she noticed the appearance of the [illegible] particularly states that she had always had [illegible] before the appearance of the lumps This ti[illegible] [illegible]n the outer aspect of the right leg other [illegible] front and back of the thigh, over the n[illegible] [illegible]he back and over both arms Only slight [illegible]

Examination—On [illegible] thirteen on the right and ten on t[illegible] [illegible]cutaneous con[illegible]

27 Am. Jour of th[illegible] 1901 Also Brit. Jour [illegible] and September

sistent tumors from the size of a split pea to that of half a walnut, and situated in the direction of the long axis of the body As those on the lower legs developed they worked themselves toward the surface and became purplish, without however, any one of them breaking down Those formations which were situated on the thighs and nates were invisible and could only be determined by careful palpation as deep shot like, hard bodies distributed in the subcutis They were very painful annoying her while sitting but did not develop further While under observation for over five months my

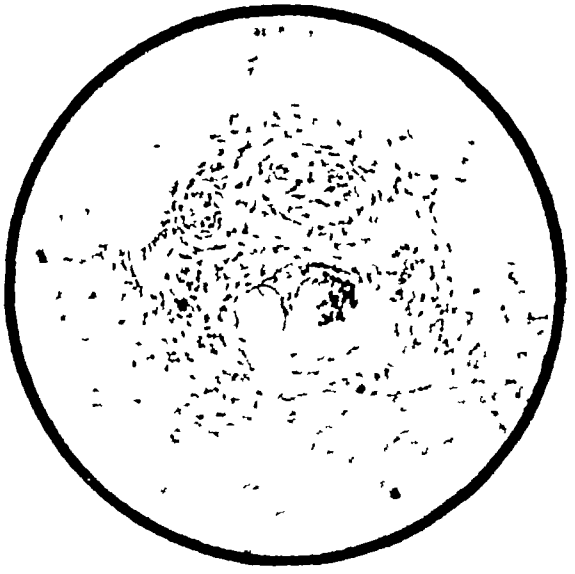

Fig. 2—The formation of giant cells from fat cells

associates and I noticed the spontaneous disappearance of the undeveloped ones first and of the others later

A week's treatment with iodid of potash and salicylate of soda had no influence on them whatever, and as they had disappeared previously without any medication nothing more

Fig. [illegible] [illegible]

was done At the time of this report [illegible] [illegible] of the affection left

A review of this case of [illegible] will show [illegible] ample [illegible]

congenital mitral affection, showing a slight stagnation hyperemia on both cheeks so frequent with heart affection, exhibits a sluggish chronic disease of *perennial* appearance and of the described qualities and peculiarities The presence of a scaling lupus pernio (possessing almost the character of a lupus erythematosus) on four toes of the left and three of the right foot, extending over the metatarsal joints, is another important concomitant symptom so frequently mentioned by investigators The *second* etiologic symptom is the positive result following the tuberculin injection The patient had a stormy reaction, 24 hours later there was a temperature of 103 and a great deal of general disturbance Inoculation on guinea-pigs taken from one of the excised formations proved negative

The onset of the affection with pains, reported by Thibierge and Ravout, and Hartung[28] was present in a very marked degree As to localization, I think this case showed a distribution of the lesions hitherto unobserved in the same patient The occurrence of deep nodules *ad nates* has, to my knowledge, not yet been described Close observation showed that they did not develop further and that none of the lesions broke down

Fig 4—Giant cell with coarse protoplasm and vacuole

The nearest approach to such a condition was a slightly doughy condition in the centers of the fully developed lesions It is furthermore noteworthy that the formations would make their appearance in winter, then disappear and others reappear, the course of the whole process taking from four to five months ending with the approach of summer

In this respect my case resembles that of Burns,[29] as regards the unusual number and distribution which suggested erythema nodosum, except for the long period it lasted which is incompatible with the latter The two cases of W Pick[30] which he calls persistent erythema nodosum occurring in two young women with no evidences of tuberculosis have very much in common with both forms of erythema There are undoubtedly transition stages between the different tuberculides Acne orchecticorum seems to be a higher development of lichen scrofulosus Certain cases of erythema nodosum, especially those which are coexistent with the lesion of erythema exudativum multiforme, cause visceral lesions so classically described by Osler, or in turn may be the effect of such systemic infectious diseases In tuberculous meningitis this is frequently the cause and leads one naturally to consider the assertion of Uffelman,[31] Baumler[32] and others who believe in the association of a pernicious form of erythema nodosum with tuberculosis, the patients mostly having been descendants of tuberculous parents It may be that erythema nodosum and erythema induratum are only different stages of the same process, with a slightly varying etiology and pathology There is another evidence of the admissibility of such hypothesis by the occurrence of one or more of these tuberculides on one person These tuberculides or paratuberculoses as Johnston calls them, have transition stages Lichen scrofulosus has been seen with erythema induratum, with the papulonecrotic tubercle or necrotic granuloma of Johnston,[26] with follicles or cutaneous tubercle described by Macleod and Ormsby,[33] etc It is probably better not to adhere too slavishly to disease headings, which sometimes are only the result of arbitrary divisions

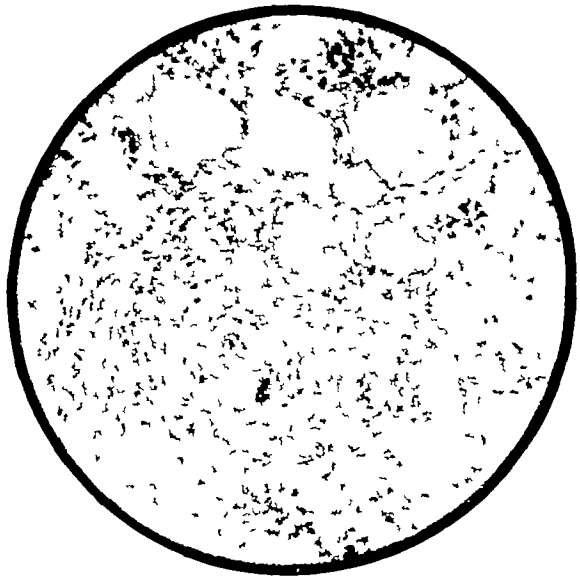

Fig 5—New connective tissue with epithelioid cells and giant cells resembling a tubercle

The histologic features of my case are in harmony with the description of other investigators, but with slight deviations An increase of the interstitial connective tissue framework (hyperplasia) (Fig 1) An atrophic degeneration of the subcutaneous fat tissue (Figs 2 and 3), and formation of giant cells (Fig 4) with radiating nuclei and epithelioid cells (Fig 5), and endothelial proliferation of the vessels were present. These changes in the subcutaneous fat tissue are only characteristic of tuberculosis when other concomitant symptoms bear them out In my case the vessel changes were not so prominent as to produce thrombosis and, in a sense, this would vitiate against the theory of a hematogenic origin But their absence could be explained by the fact that the very smallest capillaries might have been already destroyed by the fatty degeneration of the embolic plugs

28 Arch Derm et Syph lxxi p 385
29 General Cut Dis and Syph April 1905 p 177
30 Arch. Derm and Syph lxxii 1904 p 360
31 Deutsch Arch f klin Med 1872 p 76
32 Deutsch med Wochschr 1889
33 Brit Jour Derm 1901 p 367

DIFFERENTIAL DIAGNOSIS

The transition forms of erythema nodosum have been alluded to In a general way erythema nodosum can easily be differentiated from erythema induratum by the acute character and intensive systemic disturbances Its lesions are more superficial, more painful and appear more suddenly are of brighter color and more inflammatory in their character They rarely, if ever, break down and their absorption takes place in a manner resembling the color changes of a fading contusion Hence the name dermatitis contusiformis Again, erythema induratum has a chronic course as a rule does not but may break down in a small number of cases, is not connected with the stormy systemic disturbances and yields a more evanescing pigmentation

In differentiation from syphilitic gummata, which it resembles strikingly I may mention, that gummata will never appear so numerously neither will their appearance be attended by systemic disturbances Again, a gumma will not exist for months without changing If absorbed, it will do so by local or general mercurial treatment The confusion with lepra, to which it bears a far-away resemblance, is not very imminent

As the question of the tuberculides is as yet in a very undecided condition and the etiology and pathology of erythema induratum is not quite settled, the reporting of every case is a duty incumbent on the observer

In conclusion I regard it my pleasant duty to express my gratitude to Prof Harlow Brooks M D of the Department of Pathology University and Bellevue Medical College New York City for his painstaking pathologic and bacteriologic examination of this case and also to Henry Kreuder, M D New York City for the preparation of the microphotographs

42 West Ninety first Street

DISCUSSION

Dr A Raygoll, Cincinnati, said that he has always been firmly convinced that erythema induratum is an expression of tuberculosis In support of this he mentioned the case of a man who accidentally injured his finger a splinter entering underneath the nail This splinter carried with it the infection from the saliva of a tuberculous patient and subsequently an ulcer developed at that point, which proved very persistent This was followed, in the course of time by little reddish points in the line of the lymphatics of the arm These were hard and indicated an erythema induratum They gradually developed into ulcers and proved to be tuberculous, and doubtless resulted from the original inoculation under the nail The lesions were thoroughly cauterized and the patient eventually made a perfect recovery Another case reported by Dr Raygoll was that of a young woman who had a number of lesions on the calf of the leg These persisted for some time without causing any trouble Some of them ulcerated and had the appearance of tuberculous lesion This patient finally died of tuberculosis He said that since then he has become thoroughly convinced that erythema induratum is a true expression of tuberculosis Dr Raygoll said that the cases he has seen of erythema nodosum have led him to believe that it has no connection with tuberculosis The lesions in erythema nodosum are only of a transient character and without serious consequences

Dr M L Heidingsfeld Cincinnati said that in spite of the experience of Dr Raygoll he still regards tuberculin as a perfectly safe drug to use and he has never seen any deleterious effects from it He has found the American products unreliable he said and he recalled cases in which their injection had failed to produce any reaction although tuberculosis was unquestionably present In using tuberculin the physician should not only be assured that his preparation is reliable but that it has not deteriorated Dr Heidingsfeld said that the value of tuberculin as a diagnostic factor is demonstrated by the case which Dr Raygoll cited as an instance of erythema induratum (Bazin) Dr Heidingsfeld saw that patient at a later stage and was convinced that the case was one of syphilis, after four weeks of internal treatment with mercury and potassium iodid and mercurial ointment externally, the lesions cleared up entirely If tuberculin had been used early in that case the true character of the lesions would doubtless have been recognized In a case of syphilis which he saw last autumn there was a double infection with one chancre on the lip and another on the vulva The case ran a rather severe course in spite of energetic treatment and large indurated masses developed on the leg and other parts of the lower extremities These were first regarded as gummatous in character but mixed treatment had no effect on them and they subsequently proved to be tuberculous In that case an injection of tuberculin produced a decided reaction and helped to establish the diagnosis

Dr James C White Boston said that he believed he was the first to describe this affection as occurring in this country He observed a type of chronic deep nodular induration the lesions being of considerable size They occurred on the lower extremities and did not run the course of those seen in erythema nodosum On examining the literature to find a record of such instances elsewhere he came to Bazin's description of this affection to which they bore a close resemblance It is time has gone on he has seen cases which were apparently connective links between the typical lesions of erythema induratum and other conditions of the skin of probably tuberculous nature At first it was thought that the lesions were confined chiefly to the lateral and posterior surfaces of the lower extremities but it is now admitted that similar lesions are found more widely distributed over the body they are sometimes of smaller size and are not confined exclusively to the lateral and posterior surfaces It is natural Dr White said, to associate these conditions with the so called tuberculides which have more recently been described

Dr Ludwig Weiss New York City said that in a recent search of the literature he found a case closely resembling that mentioned by Dr Raygoll which Jadassohn has reported under the name of tuberculosis multiplex subcutanea The lesions in that case developed within a few weeks and then broke down leaving fistulous openings The description did not perfectly tally with that of erythema induratum Dr Weiss does not believe that in the classical erythema indurat tum of Bazin the lesions are apt to break down the same is true of erythema nodosum and he thinks that the cases recorded as having broken down lesions did not all belong to this type Dr Weiss said that it is over 10 years since Dr White's article first appeared in the *Journal of Cutaneous and Genitourinary Diseases* In that article Dr White had a premonition of the discrimination that should be made between different tuberculous lesions of the skin and warned the dermatologist not to cling too slavishly to any particular detail of the class of lesions now known as tuberculides In this class of diseases Dr Weiss regards tuberculin as a valuable diagnostic factor although he recalled one instance of dormant tuberculosis in which the disease was aroused to activity by an injection of tuberculin and rapidly caused a fatal tuberculosis of the larynx With the minute doses used at present such an accident is not likely to occur

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Prognosis in Typhoid Fever from Temperature After Cold Baths—Marchand gives the details of 7 cases of typhoid fever in which the temperature in the axilla was taken regularly 20 minutes after each bath The baths were given at 26 C (78 F) for 15 minutes and the number of baths varied from 16 to 100 in the different cases In some of the cases the temperature after the bath was found reduced by 1 17 to 1 34 degrees C (2 4 degrees F) and the patients in the group all succumbed to the disease In the patients where the reduction in temperature never surpassed 0 84 degree Centigrade (0 52 degree F) the range from 0 85 to 0 94 In this latter group were some very severe and protracted cases but the slight reduction in temperature without a favorable prognosis is confirmed by the course of the disease [illegible] published in the [illegible]

THE PREFERABLE METHOD OF ANTERIOR FIXATION OF THE UTERUS WHEN THE ABDOMEN IS OPEN *

H S CROSSEN, M.D

Clinical Professor of Gynecology, Washington University, Gynecologist to Washington University Hospital and Chief of the Gynecological Clinic Associate Gynecologist, St. Louis Mullanphy Hospital, Consulting Gynecologist, Bethesda Hospital

ST LOUIS

There has been too much laudation of particular operations as such and too little consideration of the various conditions found in the pelvis in operative cases and of how to treat those conditions

No one operation is applicable to all cases Even narrowing the subject down to those cases in which the abdomen has necessarily been opened, on account of tubal disease or other abnormal condition, the answer to the question as to which operation is preferable still depends on the associated conditions rather than on the displacement itself Any one with even a moderate experience knows that intrapelvic conditions differ widely and that an operation which in one case cures retrodisplacement, in another case might prove a complete failure

My purpose is not to describe a new operation, nor yet to take up an extended or systematic review of established procedures, but simply to mention certain practical points that have come to me in the course of my work Taking into consideration only those cases of retrodisplacement in which it is necessary to open the abdomen, for some reason, I find as already stated, that the preferable method of holding the uterus forward depends largely on the particular conditions present The cases may be divided into four classes

1 Cases in which the round ligaments and adjacent tissues are freely movable

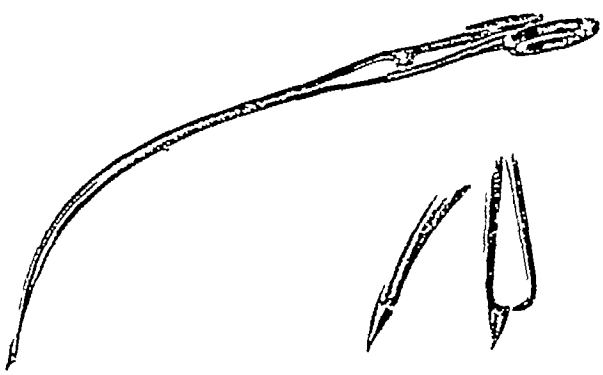

Fig 1 —The puncturing tenaculum forceps The instrument is strongly made and slender and is designed to pass easily through the tissues of the abdominal wall to penetrate the aponeurosis and peritoneum at any desired point to grasp the round ligament firmly without bruising it and to return through the wall bringing the ligament along the new canal Length nine inches

2 Cases in which the round ligaments and adjacent tissues are fixed by inflammatory infiltration or other condition

3 Cases in which the cervix lies so far forward that the axis of the uterus still lacks the normal anterior direction even when the fundus is brought into the front part of the pelvis

4 Cases in which there is so much inflammatory infiltration and contraction of the posterior part of the broad ligaments that the uterus can not be brought entirely forward, without danger of serious injury to important structures

WHEN THE ROUND LIGAMENTS ARE MOVABLE

In these cases the broad ligaments, or at least the anterior portions, with the round ligaments, are soft and yielding and can be stretched as desired The uterus

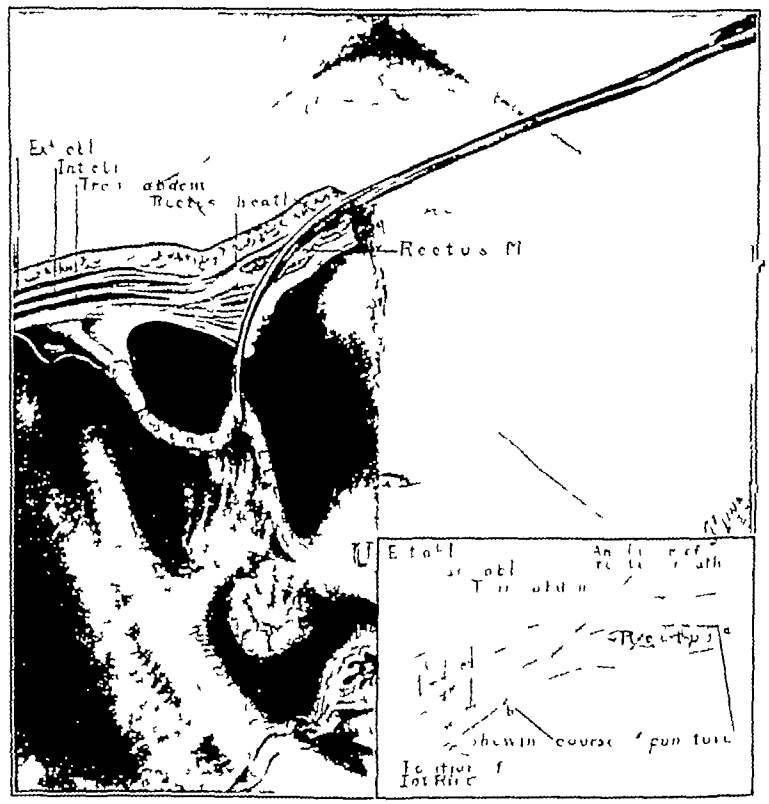

Fig 2 —The puncturing tenaculum forceps introduced through the wall, as described and grasping the round ligament In introducing the forceps through the wall the point is carried along the course indicated by the dotted line *a* to *b* in the small sketch in the corner Notice that the puncture through the strong aponeurotic wall is made near the outer margin of the rectus muscle while the puncture through the peritoneum is made at *b* which is near the internal inguinal ring The distance from *b* to the internal ring is so short (about one inch) that no puckering suture is necessary This point is further explained in Figure 3

is freely movable after the adhesions have been broken up, and if it has been necessary to extirpate a tube the work has been carried out in such a way as not to interfere with the pliability of the tissues in the neighborhood of the round ligaments In such a case, the uterus may easily be held forward either by drawing the round ligaments into the abdominal wall or by fastening the fundus itself to the abdominal wall These are both good methods when properly executed Each of them has given relief, and I see no reason for the bitter condemnatory assertions that are indulged in by writers on each side of the question as to which is preferable I have used each of the methods with good results, that depended more on the consideration of the conditions present than on the choice of the methods When the conditions are favorable as they are in cases of the first class, I prefer to utilize the round ligaments for holding forward and elevating the uterus and adnexa

*The Presidents Address St Louis Obstetrical and Gynecological Society Nov 8 1906

There are two disadvantages to the method of fastening the fundus directly to the abdominal wall

First—There is a decided uncertainty as to the amount of forward suspension or fixation that will be secured The object is to form a short band that is strong enough to hold the uterus forward and upward, but that will not interfere with the development of the uterus in pregnancy From this ideal the uncertainty extends in both directions, i e, the suspension band may become so slight and attenuated that it fails to keep the uterus forward or, on the other hand, there may result a firm fixation of the fundus to the abdominal wall that causes serious trouble during pregnancy or labor These undesirable results have occurred often enough to make them valid objections to the operation, but not often enough to warrant us in discarding the operation in conditions in which a better one is not applicable

Second—There is danger of the formation of a long slender band with which the intestines may become entangled producing acute intestinal obstruction This has happened a few times but I think the frequency or probability of its occurrence has been greatly exaggerated

Fig 3—The left round ligament drawn into place Notice that the direction of pull on the uterus is changed from lateral to anterior At the same time there is no large opening between the distal portion of the round ligament and the anterior abdominal wall requiring a suture as in the regular Gilliam Ferguson operation The distance from the peritoneal exit of the new ligament to the lateral edge of the peritoneal cavity at this level is so small (represented in the corner sketch in Figure 2 by the distance from b to the internal inguinal ring) that it is closed by moderate traction on the distal portion of the round ligament loop appearing in the wound If it is desired to bring the uterus farther forward the proximal portion of the ligament is pulled on If the peritoneum becomes tense before there is sufficient tension on the round ligament to bring the uterus well forward the peritoneum over the ligament loop may be incised and the ligament itself grasped and drawn out as desired

Both of these disadvantages may be avoided by using the round ligaments for holding the uterus forward For their utilization there are several methods applicable after the abdomen is open but one point should be kept in mind, namely that the strong part of the round ligament is that portion near the uterus and the weak part is that portion near the abdominal wall

Some depend on the weak part of the ligament for holding the uterus forward, while others depend on the strong part In the former class, folding the ligament is a method which has been modified by many operators This method with its modifications was used extensively for several years and with excellent results in many cases, but it was found that relapse occurred rather frequently, due to the stretching of the attenuated portion of ligament entering the abdominal wall at the internal ring

Then came the method of drawing the ligament into the abdominal wall until the uterus was supported by the strong proximal portion This was accomplished either by grasping the ligament within the inguinal canal and drawing it out through the internal inguinal ring or by drawing it through an artificial opening in the musculo-aponeurotic wall near the median line In either case, the ligament was drawn out until the uterus was suspended by a short cord consisting of the strong part of the ligament next to the uterus In the first method, that of drawing the ligament out through the internal inguinal ring the effect on the uterus was the same as in the Alexander operation

There are several variations in the method of reaching the inguinal canal Sandberg reaches the canal from the longitudinal median incision by pulling skin and subcutaneous tissues far to the side, loosening them from the aponeurosis of the external oblique as necessary

Peterson makes a transverse suprapubic incision and from each end reaches the inguinal canal of that side

Montgomery puts a ligature about the round ligament some distance from the uterus, threads this ligature into a long curved pedicle needle and through a window snipped in the anterior peritoneal layer of the broad ligament carries the point of the pedicle needle and the ligature beneath the peritoneum to a point near the inguinal ring Here the needle is carried through the muscular and aponeurotic structures of the abdominal wall and toward the median line where it emerges in the abdominal incision beneath the skin and subcutaneous fat

Barrett also fastens a ligature on the round ligament but instead of carrying it outward in the broad ligament and into the abdominal wall by a pedicle needle he introduces a curved ligature carrier in the shape of a forceps from the abdominal incision just beneath the upper sheath of the rectus muscle outward to the internal inguinal ring through which it enters the abdomen, then follows along the round ligament subperitoneally to the ligature Here it is brought through a small window made in the peritoneum and the ligature threaded into it it is then withdrawn bringing the ligature with it By means of the ligature the ligament is drawn out as far as it will [illegible]

Dudley in order to [illegible] of the ligament into the abdom[illegible] then appearing in the wound [illegible] to the peritoneal [illegible]

into the peritoneal cavity without touching the incision This he accomplishes by putting a temporary ligature on the ligament, threading this into a large curved blunt needle, passing the needle into the internal inguinal ring or near it through the aponeurosis, then along for some distance above the aponeurosis and then through the aponeurosis and peritoneum again into the cavity a short distance from the median line

In all these operations, the exit of the ligament from the abdominal cavity into the strong musculo-aponeurotic portion of the wall is through the internal inguinal ring or very close to it, i e, the direction of the pull of the ligaments on the uterus is not changed Consequently these have the same element of failure that has caused disappointment in certain cases following the Alexander operation and its modifications The normal exit of the round ligament is placed too far laterally to hold the uterus well forward when there is much tendency to go back after replacement. This has been noted repeatedly by operators, and, in fact, it has long been an established fact that the function of the round ligaments is to exert forward traction on the uterus not in its normal position, but only when it is in marked backward displacement

I am not condemning the Alexander operation nor its modifications It is an excellent operation in certain well-selected cases I have used it with good results and have watched it through pregnancy and labor and afterward with the utmost satisfaction But I have found that it is not applicable in certain cases of apparently freely movable retrodisplacement, namely, in those cases in which there is a persistent backward pull, as evidenced by the tendency of the uterus to go backward as soon as the replacing fingers were removed In such cases it is likely to result in partial failure, the uterus being found in moderate backward displacement after a time Likewise, a shortening of the ligaments after abdominal section by drawing them through the internal inguinal rings may result in the same partial failure if there is much tendency of the uterus to go backward

In the second general method above mentioned, that of drawing the ligament through an opening in the musculo-aponeurotic wall nearer the median line, the pull of the supporting portion of the ligament is changed from a transverse toward an anteroposterior direction, with a consequent marked increase in its ability to hold the uterus and adnexa well forward

There are several variations in the method of changing the course of the ligaments It will not be necessary to mention all of them The Gilliam-Ferguson operation stands as the type of this class Gilliam passed a temporary ligature around the ligament from 1 to 1½ inches from the uterus The skin and subcutaneous tissues on that side of the abdominal incision were then pulled aside and a sharp-pointed artery forceps was introduced through the fascia, muscle and peritoneum into the cavity, where it grasped the ligature and brought it out. With the ligature the round ligament was then drawn out as desired and the ligament of the other side was treated in the same manner Ferguson added a puckering suture to bring together the parietal peritoneum and the distal portion of the round ligament, thus doing away with any opening through which a knuckle of intestine might slip and be caught

G H Noble succeeds in satisfactorily changing the direction of the ligament and shortening it by the following method He enters the abdominal cavity through a transverse suprapubic incision made in the usual way and completes the intra-abdominal work Then at one end of the transverse incision, just beyond the margin of the rectus muscle, an artery forceps is thrust through the posterior sheath of the muscle, but not through the peritoneum The forceps is opened and withdrawn so as to make an aperture in the aponeurosis large enough to admit the finger The finger is then introduced and carried along the peritoneum and the aponeurosis to the internal inguinal ring where the round ligament, made tense by being caught within the abdomen and pulled on, is felt The finger is hooked about the ligament which is

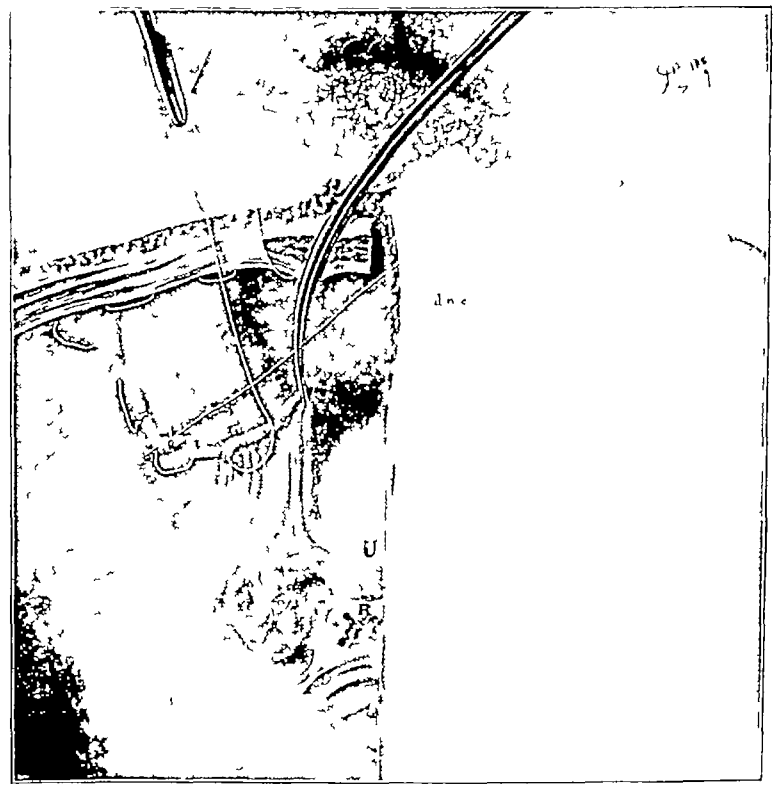

Fig 4 —The use of the puncturing tenaculum forceps in the regular Gilliam Ferguson operation The puncture is made directly through the upper sheath the rectus muscle the lower sheath and the peritoneum and the ligament grasped and brought out—the puckering suture having been previously passed After the ligament is brought out as desired the puckering suture is tied thus closing the opening at the side between the distal portion of the round ligament and the anterior abdominal wall

drawn into the wound The ligament is then drawn out to the desired extent, its peritoneal sheath being stripped back toward the uterus The other side is treated in the same way and the two ligaments fastened together over the rectus muscle

It will be noticed that in this operation the new point of entrance of the ligament into the strong aponeurotic wall is at the outer margin of the rectus muscle The peritoneum is sufficiently movable on its underlying structures to permit this shortened ligament to extend almost directly from the angle of the uterus to the point of exit at the outer margin of the rectus muscle thus

(Concluded on page 1497)

A SERIES OF INTERESTING GYNECOLOGIC AND OBSTETRIC CASES

I—AN EIGHTY-NINE POUND CYSTIC MYOMA. II.—A LARGE PARASITIC MYOMA. III—MULTIPLE PERFORATION OF THE UTERUS DUE TO A MACERATED FETUS. IV—ABDOMINAL PREGNANCY OF FOUR YEARS DURATION. V—CHORIOEPITHELIOMA.

THOMAS S CULLEN, M B
Associate Professor of Gynecology Johns Hopkins University
BALTIMORE

SUCCESSFUL REMOVAL OF AN EIGHTY-NINE-POUND CYSTIC MYOMA INTACT

As will be noted from the following history, this patient was cognizant of the fact that the tumor had existed for over 20 years At that time she was under the care of Dr James Bosley, the present health officer of Baltimore Further, it will be seen that this large growth did not prevent her from looking after her household duties until recently, and less than three months before the operation she took a 180-mile trip with no ill effects This, so far as we can learn is the largest myoma of the uterus that has been successfully removed The patient is now, eight months after the operation, in perfect health and is gaining rapidly in weight

CASE 1—Mrs McA, aged 58 was seen in consultation with Dr Marshall Smith, June 25, 1906

History—Twenty years ago she noticed a tumor in the lower abdomen and later was seen in consultation with Dr W T Howard, emeritus professor of gynecology in the University of Maryland, who at that time advised an operation Some time after this she was delivered of a healthy child, now 18 years of age This patient, although suffering from a large abdominal tumor, was able to go around and to do her work until three weeks before I saw her He chief inconvenience had been her inability to lie on her back in bed And sometimes when she would get "stalled" it was necessary for her husband to turn her over quickly otherwise she would have suffocated For two weeks before admission she had a temperature sometimes reaching as high as 103 F She was admitted to the Church Home and Infirmary July 27, 1906 There was considerable edema of the lower part of the abdomen and some edema of the legs On admission to the hospital her temperature was 100 F, pulse 105 On the morning of operation the temperature was 100 F pulse 100 respiration normal

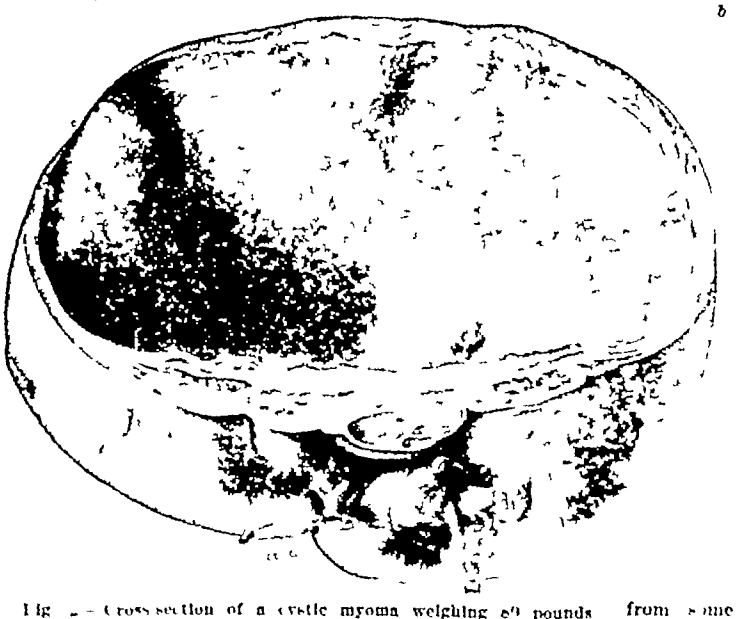

Fig [illegible]—Cross section of a cystic myoma weighing 89 pounds The pedicle is clearly seen and in the fresh specimen is not over 1 5 cm in diameter Attached to the top over the pedicle are the tube and ovary and near the tube is a piece of liver substance The tumor has been converted into one large cavity the walls of which consist of muscle In the walls are numerous cystic spaces particularly well shown at the points indicated by *a* There are several large cystic dilatations in the wall The largest is indicated by *b* The myomatous walls vary from 5 cm to 1 or 2 mm in thickness At the point *c* where the tumor lay over the vertebral column the wall is exceedingly thin. The entire inner surface is lined by partly organized blood clots which give the growth a very shaggy appearance The entire tumor was filled with blood The outer surface of the tumor is in many places covered by adhesions containing large vessels

Fig 3—A large parasitic myoma which weighed 18 pounds and was attached to the uterus by a pedicle 3 x 5 cm At the top is a broad omental adhesion carrying vessels to the tumor At *b* is a cross section of a portion of the rope of omental vessels which pass down beneath the tumor to *b* and then turn upward again plunging into the tumor *a* represents one of the largest vessels which stand out prominently Crossing these large vessels are numerous adhesions *c* is a portion of the large vessel which passed down perfectly free from the omentum to the under surface of the tumor

Operation July 30 1906 Prior to receiving the anesthetic the patient was thoroughly washed and all preparations for operation were made so that she might remain as short a time as possible under ether It was impossible for her to lie down consequently she was operated on in the sitting posture An incision was made over the most prominent part of the tumor and I attempted to puncture it the growth however, started to bleed and no cystic fluid escaped I continued the incision upward for the reason that many large veins projected into the tumor from some structure above The incision was gradually continued upward until the xiphoid was reached (Fig 1) We found that the large vessels going to the tumor were omental in origin and that they were spread out over the entire upper surface Some of them were fully 7 or 8 mm in diameter The tumor was densely adherent to the anterior and to the lateral abdominal wall These adhesions were gradually shelled off with the hand but I had to use the utmost care and do all liberating under sight as the rupture of [illegible] large vein might have caused the loss of [illegible] the hemorrhage could have been [illegible] also passed from the [illegible] The

pedicle of the tumor was not more than 1 5 cm, in diameter and was situated directly beneath the ribs On removal of the tumor I found that I had brought away a piece of liver tissue 3 cm in diameter We had no liver needles handy, so I used sharp Hagedorn needles, running the eye through instead of the sharp end This device answered admirably and the liver bleeding was easily checked by four catgut sutures The uterus and the right tube and ovary lay under the surface of the liver Anticipating the possibility of great difficulty in controlling the tumor, we had prior to operation sterilized a large foot bath and covered it over with a sterile sheet The foot bath held about one third of the tumor and the person who took charge

Fig. 5 —Pregnant uterus the fetus and placenta intact After the uterus had been well hardened the anterior surface was removed. The cervix presents the usual appearance and the uterus is firmly contracted around the fetus. The head lies in the upper portion. The left arm is firmly adherent to the left side of the chest and the skin is macerated to some extent Situated in the lower part is the placenta which extends slightly over the internal os

of it was able to guide the tumor in the desired direction without allowing it to slip from his grasp The tumor was drawn downward and outward and finally delivered from the abdomen *In the lower part it was extraperitoneal* I closed the abdomen, but left a small cigarette drain in the extraperitoneal pouch just over the symphysis

Postoperative History—The patient stood the operation well, but was commencing to collapse by the time we finished She was under ether for one hour and twenty minutes, 200 grams of ether were used The operation, from the incision to complete closure, took fifty five minutes, a much longer time would have been consumed had it not been for the combined assistance of both the Johns Hopkins and Church Home staffs The patient's temperature rose to 102 2 F within eight hours after operation, but dropped to 100 F by evening The highest pulse rate was 130 There was no postoperative vomiting The legs were bandaged on account of the edema The patient voided urine on the evening of the day of operation She was catheterized only once The usual after treatment was employed On the fourteenth day she had considerable discomfort from frequent stools The diarrhea persisted off and on for a couple of weeks At this time, however, the weather was excessively hot and diarrhea was general throughout the hospital It affected chiefly those patients who were somewhat weak The patient on admission to the hospital weighed 174 pounds Twenty three days after operation she weighed 80½ pounds The condition of the abdomen in this case was particularly interesting I did not even resect a portion of the abdominal wall, because we had to save as much time as possible during operation At the first dressing it was noted that the ribs extended out fully 6 inches from the abdomen and that the recti muscles lay on the bed on either side, while there was a good deal of loose and wrinkled skin covering the abdomen Another interesting point was that the gauze, which drained the ex*traperitoneal pocket just at the symphysis, now lay in the* middle of the abdomen as the tissues were gradually contracting After the lapse of two weeks the recti muscles could be felt gradually contracting and coming in and the costal arch was flattened down to some extent. When I examined her six weeks after operation the recti muscles were well up in the abdomen, being not over 10 cm apart. The skin had contracted down wonderfully The pendulous skin over the symphysis had retracted to a marked extent and the ribs were almost in their normal position At the time of operation there was a good deal of edema of the abdominal walls There was also edema of the legs and of the buttocks Although the utmost care was used, a bedsore developed several days after the operation, there being a black slough over the sacrum 6 cm in diameter and surrounded by a faint red halo It had resulted from pressure on the table The patient had marked edema of the back, but was forced to sit up during almost the entire operation After she went home she rapidly regained her strength The bedsore gradually diminished and in time entirely healed It is astonishing that she had so little inconvenience after the operation

Description of Tumor—Miss N Ellicott, superintendent of nurses, weighed the tumor immediately after its removal, the net weight, after deducting that of the vessel in which it lay, was exactly 89 pounds The thin part of the tumor lay posteriorly, otherwise we might have evacuated the tumor Had we done so, however, it would have been much more difficult to have gotten at the large vessels, which we encountered at

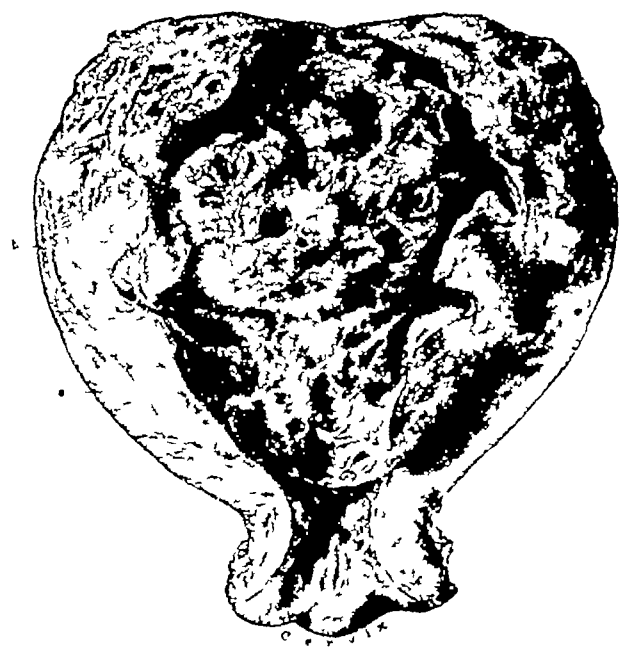

Fig 7 —Chorioepithelioma The specimen consists of a uniformly enlarged uterus The cervix is perfectly normal the body was as large as that of a five months pregnancy Occupying the entire body of the uterus is a new growth with many depressions and cystic spaces extending into the wall The growth itself presents a peculiar porous appearance (*b*) and the finger like process so characteristic of carcinoma is absent. In the lower part of the uterus the outer muscular walls are still clearly seen, but in the upper part of the cavity the growth has extended almost to the peritoneal surface The growth could hardly be mistaken for anything else It is remarkable to see such a uniform involvement of the entire uterine wall *a* Indicates clearly the sharp line of demarcation between the malignant growth and the outer muscular covering

almost every point. Had this condition persisted much longer the posterior wall of the tumor would certainly have given way and then operation would have been almost out of the question As it was, the hardened specimen collapsed of itself when placed on the table

Macroscopic Examination (Gyn and Path No 10382) —The hardened specimen is about 50 cm in length, 45 cm in breadth and approximately 25 cm in thickness Over the entire anterior surface and laterally are numerous adhesions Attached to the upper border is an area of omentum 20 cm in breadth and the hardened vessels range from 5 to 6 mm in diameter The pedicle of the tumor is 1 5 cm in breadth, 1 cm in thickness and the portion removed is 1 5 cm in length Situated just beneath the pedicle and attached to the surface of the ovary is a piece of liver substance 3 by 2 cm (Fig 2) On pressure the tumor in part seems to be solid, in part cystic At operation when I attempted to puncture the tumor, nothing but blood was encountered. The growth is, however, evidently made up of one large cystic space and numerous smaller ones, together with the semi solid area. Over the part that is cystic the muscle fibers have been greatly stretched and thinned out and there are little hernial projections, the picture being analogous to that found in a slightly sacculated urinary bladder On section the greater part of the tumor is found to consist of one cavity, which is approximately 42 by 35 cm The walls vary from 2 mm to 5 cm in thickness Only at one point is the wall very thin, namely, on the under surface where it lay over the vertebral column The greater part of the wall consists of simple myomatous tissue, but at numerous points small cystic areas are visible and the tissue has undergone the characteristic hyaline transformation One of the cysts measures 2 by 3 cm The inner surface is covered with blood and the greater part of the tumor is filled with blood, which has undergone coagulation during the hardening

Microscopic Examination —On histologic examination the growth is seen to be made up of typical myomatous tissue In many areas hyaline transformation has taken place and at some points there is typical liquefaction The inner surface of the cyst has no epithelial lining, it is covered with blood which *is faintly organized*

Dr Herbert P Cole in looking over the literature for me, has found in all about 240 cases of large tumors of the uterus

The largest authentic successful case found was that of Clarence Webster The tumor weighed 87 pounds This was also a cystic myoma and much of the fluid was removed before the tumor was extirpated Among other successful cases is that of Eastman in which the tumor weighed 60 pounds

There are numerous instances of tumors weighing from 40 to 60 pounds Keith, for example, reported one of 52 pounds, and in Dr Kelly's service at Johns Hopkins we have had very large ones Knowsley Thornton reported an instance of a fibrocystic tumor weighing 91 pounds, Tait reported one of 68 pounds, and Stockard one of 135 pounds Stockard's patient died after tapping McIntyre of St Louis operated on a patient with a tumor weighing 93½ pounds The woman died of peritonitis

Platonoff saw a patient with a tumor weighing 90 pounds Two unsuccessful operations were performed and the woman died of gangrene without removal of the tumor

Hunter speaks of a 140-pound tumor seen at autopsy Gilliam says that 200-pound tumors have been seen Such data, however, are hardly reliable unless careful histologic examinations have been made The tumor in Webster's case weighed just two pounds less than ours The operation was performed Dec 16 1902 There were numerous adhesions and the entire growth was removed under Schleich's solution and a few drops of chloroform

Those wishing to get full data on this subject should read the articles by George W Johnson,[1] G Piquand[2] Joseph T Johnson,[3] McIntyre[4] and Clarence Webster[5]

A LARGE PARASITIC MYOMA WITH MARKED DEVELOPMENT OF THE OMENTAL VESSELS, SOME REACHING 1 CM IN DIAMETER

At Johns Hopkins Hospital we have been studying with a great deal of interest the gradual weaning away, as it were, of pedunculated myomata from their parent blood supply in the uterus As the pedicle becomes smaller the blood supply from the omentum becomes more vigorous until eventually the uterus forms an insignificant source of nourishment and the omentum, as in this case, sends in very large vessels I have studied a large series of such cases, which will be published by Dr Kelly and myself at a later date In the more advanced cases the omental fat disappears completely and the vessels lie just between two peritoneal folds In this case the cord of omental vessels forming a rope 6 cm in diameter seems almost unique

CASE 2 —C , a colored patient of Dr Scheller, of Hagerstown, was admitted to the Hagerstown Hospital, Aug 4, 1906 She had had an abdominal tumor for five years The tumor rose abruptly and projected fully 18 inches from the general abdominal contour The vagina posteriorly was greatly encroached on

Operation —On opening the abdomen a tumor was encountered which was adherent everywhere to the anterior abdominal wall and also laterally Running into the anterior surface of the tumor from its upper end were blood vessels, some of them nearly 1 cm in diameter They were spread out over an area 16 cm in breadth Passing down the right side of the tumor and lying beneath it was a regular rope of blood vessels (Fig 3) These lay perfectly free from the surrounding structures, could be lifted up were covered with peritoneum and were evidently omental, but no fat was present These vessels formed a mass 6 cm in diameter and looked and felt like small masses of snakes They could be traced down to the lower end of the tumor where they spread out over its surface and plunged into its substance One of the vessels 5 mm in diameter, passed down by itself and lay absolutely free It was isolated for a distance of 18 cm being devoid of any attachment whatever It originated in the omentum and extended downward and plunged into the tumor After liberating the vascular supply we found that the tumor was attached to a small myomatous uterus The pedicle was 3 cm in breadth, 5 mm in thickness and contained but one blood vessel of any size The pedicle was cut and the tumor delivered In the vessels passing from the omentum we encountered, as a rule, one artery and two veins The artery was about one third the size of a vein As the patient's condition became rather serious although she had not lost more than two ounces of blood, we ceased the operation, the patient still retaining her myomatous uterus and a second myoma fully 25 cm across This also had vessels from the omentum plunging into its upper part and was attached to the uterus by a pedicle 2 cm in diameter As soon as the patient regains her strength thoroughly I hope to remove the uterus and the large parasitic myoma

Result —The patient made a satisfactory recovery and left the hospital about six weeks after her admission

Description of Specimen —On examination of the hardened specimen, it is found to be 23 cm in length 25 cm in breadth and 20 cm in its anteroposterior diameter It is markedly nodular exceedingly hard and weighs 18 pounds The upper omental attachment still clinging to the tumor is 17 cm in width and 8 cm in length The omental attachment that ran [illegible]

1 Johnson (G W) Collected Cases of Fibromata of the Uterus with Tables Amer Jour Obst [illegible]
2 Piquand (G) Les Tumeurs Fibreuses Kystiques [illegible] de Chir 1900 xxxiii 402
3 Johnson (Joseph T) Amer Jour Obst [illegible] 1420
4 McIntyre Trans Am Gyn Soc 1899 xxiii 17
5 Webster (Clarence) Jour Obst [illegible] August 1903 [illegible]

the side of the tumor consists almost entirely of blood vessels Its attachment at the lower border is 20 cm broad. Even in the hardened state some of the blood vessels are nearly 1 cm in diameter

DEATH OF FETUS WITH SUPPURATION, PERFORATION OF UTERINE WALLS, SUPRAVAGINAL HYSTERECTOMY, RECOVERY

This case demonstrates how Nature, if left alone, may successfully ward off an attack of general peritonitis Here there was suppuration in the uterine cavity, numerous perforations of the uterus—fortunately situated entirely in the anterior wall—and then successful walling off by the abdominal wall becoming adherent to the uterus

Case 3—A. P, colored, aged 21, was admitted to the Cambridge Hospital, March 4, 1906 The patient had been thought to be pregnant one year before She had been carefully watched for some time, but no further developments had taken place She had had some slight fever Nothing more definite could be learned, however When I examined her the cervix was soft, the uterus was globular and lay half way between the umbilicus and the xiphoid The growth was apparently somewhat movable

Operation—I made an incision over the growth and immediately came in contact with what looked like grumous material, which suggested a suppurating ovarian cyst As the tissues were densely adherent, I continued the incision upward

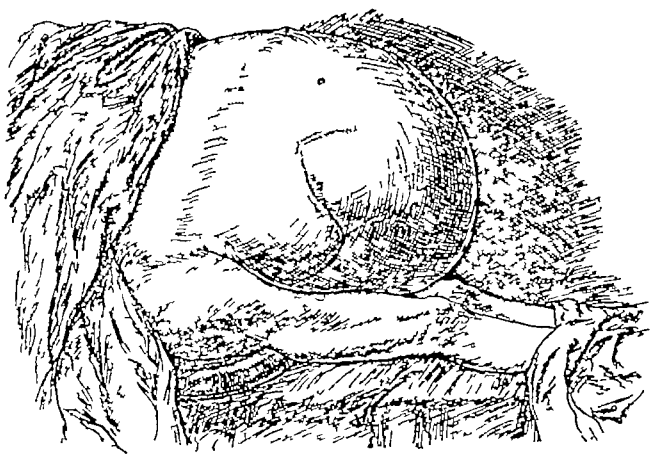

Fig 1—Tremendous abdominal enlargement due to a cystic myoma The abdomen is markedly and uniformly distended and the growth extends down almost to the knees It will be noted that there is no sagging in the flanks. Coursing over the surface were very large vessels When it is realized that the abdominal incision extended from the xiphoid cartilage down over the entire length of the tumor and then back to the symphysis it is readily seen that the incision was nearly 4 feet in length

and opened up the general peritoneal cavity On loosening the other adhesions I found the omentum adherent This was clamped and cut The tumor was intimately blended with the thickened abdominal peritoneum It was shelled out as rapidly as possible, but pus oozed from the surface in various directions (Fig 4) I thought that I was dealing with an ovarian cyst, but was surprised to find on releasing it from the adhesions that it was the enlarged and globular uterus I amputated through the cervix The tubes and ovaries were covered by a few slight adhesions, but were otherwise normal and were left behind It was with the greatest difficulty that enough peritoneum was obtained to close the abdomen, as so many raw areas had been left where the uterus had been adherent to the abdominal wall A gauze drain was introduced into the lower part of the incision The patient improved rapidly and left the hospital feeling perfectly well

Description of the Uterus (Gyn and Path No 9810)—The specimen consisted of an irregular and globular mass approximately 18x17x15 cm in diameter Its surface was everywhere covered by adhesions, and at numerous points were openings irregular in shape and varying from 3 mm to 5 mm. or more in diameter Through these openings quantities of pus welled out during the operation The pedicle or cut surface was 4 cm in breadth, 3 cm across and in the central portion of this was what looked like the cervical canal On opening the specimen after it had been hardened we found that this tumor was the uterus (Fig 5) The walls varied from 1 5 mm to 4 mm in thickness

Fetus Snugly filling the entire cavity was a fetus (Fig 5) The length of this fetus from elbow to axilla was 7 cm, from elbow to shoulder 8 cm. The breadth of the fetus in the axillary line was 13 cm Other measurements could not be made on account of the distortion of the child, but it appeared to be an eight month fetus The skin was somewhat macerated The child had evidently been a mulatto, as in many places the mottled appearance was still present. At other points, however, the outer skin had been rubbed off and the surface had the pale appearance of a white child. The hair which was matted up against the uterine wall was curly and black and several centimeters in length

Placenta The placenta occupied the lower quadrant of the uterus and projected over the cervix, there had been a partial

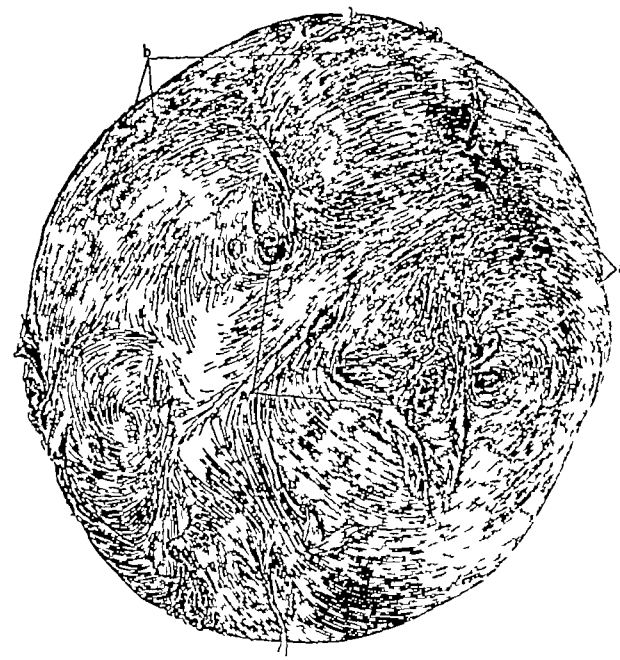

Fig 4—The perforated pregnant uterus as seen on removal It is everywhere rough and covered by adhesions In the lower part of the field is seen the stump of one tube At points *a a* are perforations of the uterus whence pus was seen oozing out, at *b b* the walls are exceedingly thin, there have been many adhesions and pus is lying on the surface One would not for a moment take this to be the uterus except for the presence of the tube

placenta prævia The placenta at the thickest portion was 2 cm in thickness Attached to the surface of the child, especially in the vicinity of the hair, was much friable, yellowish material This looked very much like inspissated pus It was from the surface of the uterus at points of perforation that the purulent discharge came during the operation

Sections of Uterine Wall Sections from the uterine wall showed that the outer surface, at certain points, particularly where it was adherent to the abdominal wall, was covered by numerous adhesions On the protected side cuboidal cells were visible The muscle at such areas showed a great deal of small round celled infiltration The inner lining of the uterus was much altered There was a good deal of canalized fibrin and also regular ribbons of hyaline and canalized fibrin Just beneath the surface and on both sides of this were numerous small round cells and polymorphonuclear leucocytes At a few points calcified villi could be made out Decidual cells were still in evidence but they had become smaller

Remarks—There had evidently been a chronic inflammation of the inner surface of the uterus coupled with an inflammatory process on the outer surface at the points where the uterus was

adherent to the abdominal wall In this case there had been death of the fetus for some cause or other and discharge or absorption of the liquor amnii Suppuration had taken place in the uterine cavity At some points the uterine walls had become perforated and the pus had trickled out over the surface Fortunately, no intestines lay in the way and the pus had glued the uterus to the anterior abdominal wall This is certainly one of the rarest conditions to be met in the literature

ABDOMINAL PREGNANCY OF FOUR YEARS' DURATION, OPERATION, RECOVERY

In this case there was a typical history of a pregnancy going on apparently to term Labor pains developed and soon ceased and the patient retained a tumor for between three and four years without any marked discomfort. It is certainly remarkable that this abdominal tumor persisted so long without giving rise to any alarming symptoms The nourishment of the abdominal pregnancy was, of course to a great extent furnished by the omentum

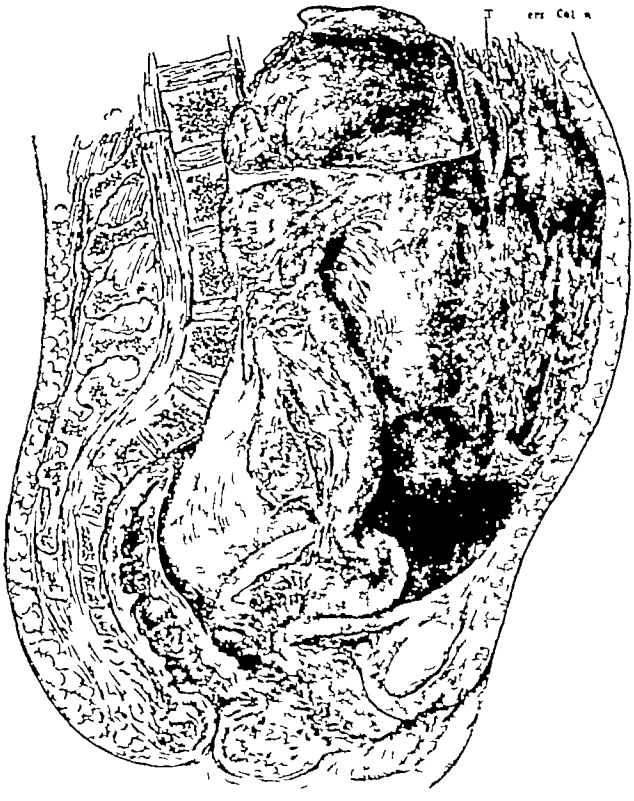

Fig 6—Abdominal pregnancy of four years duration—The illustration is an exact reproduction of the abdominal contents and has been drawn from the specimen The uterus is normal in size normal in position Attached to its right side is a large pus tube which is densely adherent to the sac. On the left side the structures are not clearly outlined, as the broad ligament was intimately attached to the pregnant sac. Passing over the anterior surface of the sac in its upper portion and considerably flattened is the transverse colon Densely matted to the surface of the sac is the omentum In the upper part of the sac a window has been cut out and to the left a hand at the top a foot, and between these two and lying in the vicinity numerous tufts of hair represented in black may be seen The sac passes down and almost completely fills Douglas pouch. This tumor had lain in the abdomen nearly four years Apart from the adhesions to the transverse colon the intestines were perfectly free

Case 4, Gyn No 13272—J L., colored, married aged 28, was admitted to the Johns Hopkins Hospital from the dispensary Sept 27, 1906

History—She complained of pain and swelling in the abdomen Her general health had always been good and she had never consulted a physician before Her menstrual history was unimportant She had been married fifteen years and had had four children, the eldest nearly 15 years old. The second child was deficient mentally but lived five years The third was 10 years and the youngest 8 years of age. Her labors had all been normal, there had never been any miscarriages For some years she had had a slight amount of thick, white, foul smelling discharge, more marked before and after her menstrual periods than at any other time. For several years she had been constipated, the bowels not moving for two or three days at a time She had passed no blood nor mucus

Present Illness—About four years ago she noticed a small lump in the lower part of the abdomen. This was the size of a baseball situated below and to the left of the umbilicus The tumor increased in size at a uniform rate and the patient thought she was pregnant. At the end of nine months the tumor reached above the umbilicus The breasts were enlarged and contained colostrum The patient had had no nausea or vomiting Her menstrual periods had been regular, although she had had a very scanty flow She was certain that she had felt movements of the child About the time that labor should have come on she had bearing down pains beginning in the evening and lasting until early morning The pains ceased then and never returned The patient thinks that she has never had any other signs or symptoms since that night The breasts gradually became soft and dried up The tumor seemed to decrease slightly in size No movements were felt and the patient suffered no discomfort. She became convinced that she had a tumor

Symptoms Until about a year ago she could go about her work without difficulty, but then she began to notice a little soreness and the "tumor began bothering her"

Within the few months previous to admission she had felt an increase in the amount of soreness She had had headaches at times, her tongue had been coated, she had frequently felt nauseated but had not vomited After walking a good deal there was a burning sensation in the lower part of the abdomen, and during the last two months the headaches had been quite severe The patient had to stop work on account of the burning pain that would come and go This pain was eased by lying down She slept well, but her appetite was poor and she said she did not gain in weight. There was no pain nor burning on defecation or urination

Examination.—Dr Hutchins the resident gynecologist, found the patient rather emaciated The abdomen was distended rather more on the left than the right side by a tumor which rose from the pelvis and reached 4 cm above the umbilicus in the median line The tumor felt cystic, it was movable, dull everywhere on percussion and no fluid wave was noted On vaginal examination no evidence of infection could be found The cervix was firm There was slight bilateral laceration The uterus was in anteposition, normal in size and apparently in no way connected with the abdominal tumor Movement of the tumor did not draw the cervix upward Clinically, the tumor was thought to be an ovarian cyst or a myoma, but no definite diagnosis could be made

Operation—Sept 28, 1906 After making a long abdominal incision it was found that the abdominal cavity was occupied by a large "tumor of the left ovary," to which were adherent the omentum, the entire transverse colon, a portion of the sigmoid, and the ascending colon The uterus was densely adherent to the right side The omentum was tied and cut, a portion being left attached to the tumor, the proximal portion being reflected backward with the transverse colon In doing this the thin wall of the tumor was ruptured and an ounce or two of thick creamy, yellowish material escaped This was rapidly sponged up and further escape controlled by pressure with gauze In order to avoid infection, so far as possible, the right tube which had been converted into a pus sac and was adherent to the cystic tumor was liberated The broad ligament on the left side was clamped and cut so that the tumor could be shelled out of the pelvis and tipped over to the left side In this way the grumous contents of the cyst were prevented to a great extent from escaping into the abdominal cavity After the tumor was shelled out there was a great deal of bleeding from the mesocolon This bleeding was checked as far as possible by sutures and the transverse colon was then curved in on itself so that the mesocolon formed a funnel A gauze drain

was introduced into this as it dropped down on the pelvic brim and was brought through the vagina In this way we were able to check the bleeding almost completely The abdomen was closed without drainage from above

Result—The patient made a very satisfactory recovery and was discharged Oct 21, 1906

Description of Tumor (Gyn and Path No 10417)—The specimen consists of an abdominal tumor which was connected with the left broad ligament and the left tube and ovary It was absolutely free from the uterus, which was not removed. The specimen in the hardened state measures 24 cm in length, 18 cm in breadth and 16 cm. in its anteroposterior diameters (Fig 6) Attached to its right side are the right pus tube and the right ovary To its left are the tube and ovary, which are plastered down on it. Covering almost the entire upper surface of the tumor is omentum, which is densely adherent to the mass and furnishes a large part of its blood supply The walls of this tumor vary from the thickness of paper to two or three millimeters From this tumor grumous material, like fat mixed with pus, escapes and at several points hair can be seen. On cutting a window out (Fig 6) the interior is found to be filled with a fetus, which is of at least seven or eight months' growth On account of the distorted condition it is difficult to get the exact age, but the sole of the foot measures 6 5 cm in length and looks mature. The other parts are correspondingly large The hair of the child is black and curly There are several points where slight ulceration of the surface has taken place These points correspond to the very thin areas noted in the outer covering The right tube, which was so firmly glued down that it was thought necessary to remove it, in the hardened state, measures 10 cm in length It is entirely covered by adhesions, and at its fimbriated end reaches 2 5 cm in diameter The ovary is also covered by adhesions, but is not enlarged

The left ovary is very much flattened and covered by adhesions The tube runs over into the tumor mass and is lost. It is flattened out and at one point measures 8 cm in diameter The placenta is attached to the left side of the mass

Histologic Examination—The sac enclosing the fetus shows that where the omentum has been adherent it has been transformed almost entirely into new and old connective tissue, [illegible] the outer adhesions which contain islands of adipose [illegible] are for the most part made up of dense fibrous tissue Passing inward the fibrous tissue looks older and then hyaline areas are seen which in size and form closely resemble placental villi Between these are many small round cells and spindle cells The inner portion is composed of similar hyaline areas surrounded by a zone of brown pigment that has evidently resulted from an old hemorrhage The inner surface is lined by necrotic tissue which is especially rich in canalized fibrin, containing chiefly polymorphonuclear leucocytes In no place is there evidence of muscle fibers and it looks as if the case was one of an abdominal pregnancy in which the sac, which was partly supported by the omentum, had gone on to new connective tissue formation

Remarks—As noted in the description of the operation the uterus was in no way implicated in this growth It was situated in the center of the abdomen and gave no signs of being half of a bicornuate uterus

Diagnosis—Abdominal pregnancy of 4 years' standing, suppuration of the sac, dense omental adhesions

CHORIOEPITHELIOMA WITH THE UTERUS THE SIZE OF THAT OF A FIVE MONTHS' PREGNANCY, HYSTERECTOMY, APPARENT RECOVERY

This disease, although by no means rare is not very common From Baltimore only two cases have been reported In 1895 J Whitridge Williams,[6] under the title "Deciduoma Malignum" reported a case occurring in the University of Maryland Hospital, and in the last edition of Kelly's "Operative Gynecology" a case is cited from the Gynecological Department of the Johns Hopkins Hospital Thus at the Johns Hopkins Hospital only two cases have been encountered in 17 years

6 Johns Hopkins Hosp Rep vol iv 1895

By a fortunate coincidence on the morning on which I operated on the patient whose history is here given, Dr Cuthbert Lockyer of London, England—the man who has worked so much on this subject in Great Britain—was present. Even from the macroscopic examination the gross appearance was so characteristic of the placental growth that both of us at once said "chorioepithelioma" In this case the decidual-like cells, those supposed to originate from Langhan's layer, predominated, but in some places the large sinuses, the brown-staining protoplasm and the characteristic vacuoles were in evidence The specimen is particularly interesting on account of the uniformity of the distribution of the growth throughout the entire uterine body

CASE 5, Gyn No 13204—The patient was admitted to the Johns Hopkins Hospital on Aug 31, 1906, and was discharged on Sept 25, 1906

Examination—She was not very well nourished The mucous membranes were of a fairly good color There was no glandular enlargement The heart and lungs were normal On examination Dr Rushmore found the abdomen somewhat distended by a firm mass which rose out of the pelvis and extended as high as the umbilicus, rather more prominently on the left than on the right side The mass was slightly movable and not tender except just above Poupart's ligament on the left side It was regular in outline and on deep inspiration its upper border was obliterated by the surrounding intestines The vaginal outlet was moderately relaxed, the cervix was high in the vaginal vault, lying far back and pointing downward The cervical lips were not hypertrophied, the os was slightly patulous There was no induration suggestive of new growth The mass in the pelvis was uniformly fixed On examination, under ether, the tumor seemed to be freely movable, but resembled a fibroid about 6 inches in diameter with a cystic mass on the left The breasts contained colostrum

Operation—September 3 On exposure of the enlarged uterus the appearance suggested pregnancy very strongly The vessels were much dilated No definite nodules could be made out in the fundus, but on the posterior surface was a slight prominence, with a curious yellowish discoloration of the tissue beneath, and there were numerous dilated blood vessels suggestive of a malignant new growth As a definite diagnosis could not be made from palpation we decided to incise the uterus over the prominence, at the same time carefully walling it off, so that there would be no danger of infection and the general cavity would be protected On incision a vascular new growth was immediately seen This had a spongy appearance and immediately suggested a malignant growth differing entirely from carcinoma and in no way resembling sarcoma The incision was immediately closed with silk and the uterus removed A vaginal drain was inserted in the lower angle of the abdominal wound in order to drain down to the peritoneum The liver was carefully examined for metastases, but none could be detected

Result—The patient was examined on September 24 prior to her discharge The abdominal incision was well healed, neither induration nor tenderness could be made out in the vaginal vault Dr Holland writing me on Oct 29, 1906 says "I received a letter from her two days ago She was able to be about the house is cheerful and is gaining in strength She still complains of pain in the right arm which developed when she was in the hospital"

Remarks—In this case there was no positive history of a recent miscarriage although the possibility can not be excluded The contour of the uterus on pelvic examination strongly suggested a myomatous uterus and with the abdomen opened it was impossible for one to exclude the possibility of pregnancy

Description of the Tumor (Gyn and Path No 10278)—The specimen consists of a greatly and uniformly enlarged uterus measuring 20 cm in length, 13 cm in breadth and 12 cm in thickness The anterior surface is smooth and glistening, the posterior is covered by many adhesions thin and fan like Attached near the left cornu is a tag of omentum On section the uterine cavity is found to be 15 5 cm in length

The uterine walls vary from 3 to 6 cm in thickness The outer portion of the wall consists of muscle varying from 1 to 1 5 cm in thickness Lining the entire uterine cavity is a spongy, porous growth. The uterine mucosa as such is not recognized, but is represented by hills and hollows The projections into the cavity are dome-shaped and vary from 5 to 2 cm in depth Here and there on the surface are cystlike depressions with narrowed bands of tissue stretching from side to side. There are also numerous cavernous spaces bridged over by bands of the growth This growth involves the entire uterine wall, both anteriorly and posteriorly The great thickening in the wall is due to the presence of the growth, which varies from 1 to 6 cm in thickness At the fundus it extends almost to the peritoneal covering The growth in no way resembles a carcinoma, nor is there any appearance suggestive of a sarcoma One is instantly reminded of the growths that occasionally occur after a miscarriage The cervix is somewhat flattened, is 6 cm in breadth, and its lips appear to be normal (Fig 7)

Microscopic Examination—Sections from the cervix show little alteration save for the fact that many of the glands are small and round, and that they appear to be somewhat dilated Here and there they extend for some distance into the muscle They do not, however, show the slightest evidence of any active process The tissue lining the cavity has undergone almost complete necrosis It is still represented, however, by a great deal of canalized fibrin containing polynuclear leucocytes, and here and there, especially in the vicinity of the large blood vessels, are areas where the cells are still preserved These consist of large discrete cells containing small vesicular nuclei, nuclei of moderate size that have stained deeply, and still larger nuclei containing vacuoles and great masses of protoplasm staining very deeply The protoplasm of many of the cells contains vacuoles or clear spaces In the deeper portion, that is, in the vicinity of the muscle, there are large blood sinuses, and lining these are cells closely resembling decidual cells They have for the most part vesicular nuclei, which vary considerably in size from very small ones to others very large and lobulated Scattered throughout this decidual like tissue are numerous vacuoles In the vicinity is much canalized fibrin with isolated cells of a smaller character scattered throughout it. The protoplasm of these so-called decidual cells, wherever situated, is of a brownish tinge At numerous points are isolated masses of these decidual like cells lying perfectly free in the blood, thus showing that they are either isolated and free masses or finger like projections cut across In some places are large plaques of protoplasm containing six or more nuclei, and in the immediate vicinity the canalized fibrin contains collections of polymorphonuclear leucocytes At a few points are elongated, very deeply staining masses of chromatin lying free in hyaline material The line of demarcation between the muscle and the new growth is at some points sharply defined, but in numerous places the cells of the new growth are wandering in and completely overwhelming the muscle fibers In the advancing margins there is a certain amount of small round celled infiltration, and in the corresponding deeper portions there is a great tendency for the growth to undergo coagulation necrosis This is undoubtedly a chorioepithelioma, but one in which no placenta villi are demonstrable

Remarks—The contour and general form of this growth before the uterus was opened corresponded almost identically with those of a myomatous uterus There was on the left side a slightly nodular elevation which was most suggestive of myoma Curettings, of course, in this case would have yielded nothing but necrotic tissue, but this should immediately have put us on our guard Such a finding would exclude myoma and would also tend to rule out adenocarcinoma, as in an adenocarcinoma such extensive areas of coagulated necrosis are rarely to be found

Histologic Examination of Scrapings Four Months Before Admission to Hospital—These scrapings were made by Dr Holland and fortunately had been put aside and were examined after the removal of the uterus It will be seen that although there are a few suspicious changes no positive diagnosis could have been made

Gyn and Path 10275 The greater part of the tissue is entirely necrotic, it takes the eosin stain, or when the hematoxylin is noted the cells are very cloudy In some places there are shadows of very large nuclei and here and there the nuclei are still perfectly preserved These, however, are elongated, some of them are irregular and stain deeply The picture is not one that would enable a pathologist to make a satisfactory diagnosis There are, however, islands that strongly suggest sarcoma or that, considered in conjunction with the history, suggest a malignant placental growth The section is one that would certainly call for further examination

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THE PREFERABLE METHOD OF ANTERIOR FIXATION OF THE UTERUS WHEN THE ABDOMEN IS OPEN

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ST LOUIS

(*Continued from page 1490*)

affecting a decided change in the direction of traction The operation has the disadvantage that it requires extensive dissection and handling of tissues deep in the abdominal wall

Of the various methods of utilizing the round ligaments after the abdomen is open, the one I have found most useful is practically the Gilliam-Ferguson operation Instead of following the usual technic however I find that the work can be more conveniently and expeditiously executed by passing a puncturing tenaculum forceps (Fig 1) through the wall, grasping the ligament directly and bringing it out along the forceps track The exact technic preferred for the class of cases under consideration is shown in detail in the following steps

1 The special work for which the abdominal cavity was opened having been completed, the left round ligament is grasped with an ordinary tenaculum forceps about 1½ inches from the uterus The right ligament is caught in a similar manner with another forceps and then any retractors that are in the way are removed from the abdominal wall The grasping of the ligament of each side with the tenaculum forceps facilitates the subsequent manipulation of the ligaments, after the removal of the retractors which expose the pelvic cavity

2 The point of the puncturing tenaculum forceps is entered in the left side of the wound just beneath the upper sheath of the rectus muscle and about one inch above the pubic bone. It is passed outward just beneath the sheath for an inch and then the point is directed downward and made to puncture the rectus muscle and posterior sheath, but not the peritoneum Guided by the fingers in the abdomen, it is then passed outward between the peritoneum and the aponeurosis to a point about one inch from the internal inguinal ring, where it is made to penetrate the peritoneum The handle of the instrument is then raised so as to direct the point toward the round ligament and is made to grasp the ligament and peritoneum 1½ inches from the uterus (Fig 2)

In the class of cases under consideration the ligament and peritoneum are usually so stretched and lax that they are easily drawn into the new canal as a small cord If the ligament is unusually thick or if the peritoneum is so thickened that it probably will not pass easily into the forceps canal a window may be snipped in the peritoneum in front of the ligament and the ligament alone grasped and brought into the canal

3 The forceps is then withdrawn bringing the ligament with it into the forceps track and out at the ab-

dominal wound (Fig 3) The loop of ligament brought out is now caught and held by an ordinary tenaculum forceps, while the right ligament is brought out in a similar manner After the ligaments are brought into position the tension is adjusted. It may be necessary to bring out a little more of the proximal portion or a little more of the distal portion, the former to bring the fundus well forward and the latter to close effectively any space that may exist between the distal portion and the parietal peritoneum By paying attention to this latter point the peritoneal puncture may be made a considerable distance from the internal inguinal ring without leaving any opening through which an intestinal coil might slip If fearful on this point, the forceps may be carried to within half an inch of the ring or even practically to the ring before puncturing The peritoneum being freely movable on account of the loose subperitoneal tissue, is drawn inward and puckered when the proximal portion of the ligament is drawn on to bring the uterus forward This brings the peritoneal exit near the aponeurotic exit of the new ligament, near the outer margin of the rectus muscle The direction of the new ligament, therefore, is forward, practically the same as in the Gilliam-Ferguson operation by the regular technic

4 The ligaments are then fastened in their new position If long enough the loops are overlapped in the median line and fastened to each other and to the upper sheath of the rectus If not long enough to reach to the median line, they are fastened securely in the forceps track by catgut sutures passed through the upper sheath and the ligaments beneath The abdominal incision is then closed in the usual way

By the method just detailed, the ligaments may be transplanted into the abdominal wall very quickly—giving a strong, reliable forward and upward traction to the uterus and adnexa and without any free bands or dangerous adventitious openings The advantages of this particular technic in suitable cases over the usual technic of the Gilliam-Ferguson operation is that it simplifies and expedites the work by doing away with the temporary ligation of the ligament and also with the lateral puckering suture.

The puncturing tenaculum forceps here mentioned may be used with advantage in the regular Gilliam-Ferguson operation It may be used also in those operations in which the puncture of the aponeurotic wall is made practically at the internal inguinal ring, though care must be exercised that the deep epigastric vessels be not injured

I designed this puncturing tenaculum forceps some time ago and after considerable experimenting have about what I want I have been using it now for a year and have found it so convenient and satisfactory that I thought it worthy of presentation as a useful addition to our armamentarium.

I have used it both with the ordinary longitudinal incision and with the transverse incision It is strong and slender and is designed to pass easily through the tissues of the abdominal wall, to penetrate the aponeurosis and peritoneum at any desired point, to grasp the round ligament firmly without bruising it and to return through the wall, bringing the ligament along the new canal Possibly some one has already described such a forceps, if so, it has escaped my notice Both the Gilliam forceps and the Barrett forceps are radically different.

WHEN THE ROUND LIGAMENTS ARE FIXED

In this class come those cases of retrodisplacement in which there is fixation of the round ligament and adjacent tissues so that it is not practicable to draw into the wall either the round ligament and adjacent peritoneum or even the round ligament alone

Such fixation may be due to inflammatory infiltration, associated with salpingitis, peritonitis or cellulitis or it may be due to the way the ligatures are placed in removing a damaged tube or ovary Unless particular care is exercised in excising the damaged adnexa, the tissues are likely to be fixed by the ligatures, in fact, when mass ligatures are passed and tied before the uterus is brought well forward the organ may be so fixed by the ligatures that it can not afterward be brought forward satisfactorily To prevent this it is well to avoid mass ligatures and to bring the uterus well forward before tying any ligatures that may interfere with its mobility

In these cases the round ligaments are so fixed by inflammatory infiltration or other abnormal condition that the lateral implantation operation can not be satisfactorily carried out. In these cases the choice lies between ventrosuspension and the regular Gilliam-Ferguson operation with very short ligament loops The latter, I think, is the preferable operation of the two, for the reason that the suspension cords are stronger and more enduring and there is no free band in the peritoneal cavity with which the intestines may become entangled. Also the lateral sutures may be passed so as still better to elevate the prolapsed adnexa Furthermore, there is little or no chance of a firm fixation by scar tissue that would interfere with pregnancy

In the execution of the regular Gilliam-Ferguson operation, the puncturing tenaculum forceps is exceedingly convenient for puncturing the rectus muscle catching the ligament at the desired point (Fig 4) and bringing it out through the muscle A short one, only slightly curved, would be more convenient in this particular operation, though the long one may be used

In the class of cases under consideration, it is seldom that the broad ligament tissue is so infiltrated that the round ligament can not be brought out the short distance required for this operation. In such an extreme case, regular ventrosuspension would be required

Fastening the uterus forward by attaching the fundus to the vesical peritoneum seems hardly sufficient for the necessities of the case In nearly all cases of troublesome backward displacement there is also considerable downward displacement which has an important bearing on the patient's distress Any operation carried out for the retrodisplacement should overcome also the prolapse of the uterus and adnexa. The uterus should be held up as well as forward, and ordinarily this can not be accomplished satisfactorily by simply bringing the fundus forward and fastening it to the vesical peritoneum

WHEN THE CERVIX IS TOO FAR FORWARD

In the cases of this class the cervix comes so far forward that the uterus does not have the proper forward inclination even when the fundus is brought well into the front part of the pelvis The raising of the fundus and the adnexa relieves the symptoms for a time, but the position of the uterus with the body still directed straight up or slightly backward is such that the intestines run in front of it and sooner or later it is forced backward again into a troublesome retrodisplacement.

The cause of the cervix being so far forward is the lax condition of the supporting structures, particularly the

sacrouterine ligaments Occasionally the cervix is held forward by shortening of the tissues anterior to the cervix from inflammation or other cause When this is the case the contraction should be overcome by stretching or incision before an attempt is made to fasten the uterus forward. Generally, however, the tissues are lax all around the cervix.

In these cases, in addition to fastening the fundus forward while the abdomen is open, the cervix should be drawn backward and raised by shortening the sacrouterine ligaments This is accomplished by means of a puckering suture Bovee has probably done more in the development of round ligament shortening by various methods than any one else

We are interested now only in the shortening when the abdomen is open. With good exposure of the pelvic cavity and the intestines packed out of the way there is not much difficulty in accurately placing a suture that, when tied, will effectually pucker the ligament and lift the cervix upward and backward. As Dr E C Dudley has pointed out, the suture should be passed rather superficially so as to avoid injuring vessels and other structures near the pelvic wall, and the surfaces to be brought together should be roughened so that agglutination will take place and adhesions follow Both sutures could be placed before either are tied, for when the cervix is drawn back close to the rectum it is difficult to place a suture satisfactorily in this region

In most of these cases of relaxed sacrouterine ligaments there has been marked laceration of the pelvic floor, the repair of which is indicated as a part of the operative work Occasionally, however, such a condition of the sacrouterine ligaments is found in patients who have borne no children and have no laceration of the pelvic floor

In cases with laceration, repair of the pelvic floor for the purpose of holding the cervix well back in the pelvis sometimes proves insufficient, the constant pressure of the unsupported cervix causing gradual stretching of the repaired floor and finally descent of the cervix to its old position and a return of the retrodisplacement. In these cases, shortening of the sacrouterine ligaments while the abdomen is open, in addition to fastening the fundus forward, adds much to the completeness and permanency of the replacement and may make the difference between success and failure in the final result

WHEN THERE IS CONTRACTION OF THE POSTERIOR PART OF THE BROAD LIGAMENT

There are certain cases of retrodisplacement with extensive chronic inflammation in which, after removing a disorganized tube and breaking up the adhesions posterior to the uterus and broad ligaments, there is still so much inflammatory infiltration limiting the mobility of the uterus that it can not be brought well forward without danger of injury to important structures or such resulting tension as will cause distress. The question is What is the best procedure in such a case? Shall we persist in trying to loosen the uterus so that it will come far forward, at the risk of an injury to the large vessels along the pelvic brim which are firmly imbedded in the infiltrated tissue shall we fasten the fundus forward to the abdominal wall under strong tension, or shall we leave it in its perpendicular or slightly backward position?

I think that as a rule, the last-mentioned plan is the best in these exceptional cases The principal symptoms are due to the inflammatory mass which has been removed Usually the uterus can easily be brought forward to a position midway between the normal position and decided retrodisplacement, and this position, when maintained, practically never in itself causes troublesome symptoms

Whether the uterus will stay in this elevated position or return to its former one depends on whether the tissues are pliable and the uterus movable. If they are, the uterus will not stay in this midposition, but when the tissues are fixed by infiltration, this with the scar tissue that results from the removal of the diseased tube or tubes so fixes the uterus that it is likely to be held in that position indefinitely

To favor the maintenance of the uterus in this position, care should be taken, before closing the abdomen to see that the intestines extend into the posterior part of the pelvis and that the omentum comes down over them and is, when long enough, tucked in back of the uterus The intestines and omentum back of the uterus assist in holding the latter forward during the healing process and also tend to prevent adhesions which extend directly from the uterus to the posterior pelvic wall, the contraction of which would draw the uterus further back

In certain of these cases some of the structures alongside of the uterus on one or both sides may be fastened forward, thus helping to maintain the uterus part way forward both during the healing process and afterward In one especially troublesome case of this kind I was able to secure a satisfactory result by suturing the upper anterior margin of the broad ligament to the anterior abdominal wall for a considerable distance inward from the pelvic margin on each side

In the after-treatment of the cases of this class, it is well to have the patient lie on her side and well forward partially on the abdomen, most of the time, and not much on her back If the cervix comes low, it is well also to have the patient wear a pessary that will hold it well back in the pelvis during the healing process, provided the instrument causes no severe pain

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TREATMENT OF TRAUMATIC GANGRENE

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In this brief paper it is my intention again to call attention to a procedure which in my experience has proved of great utility in the management of these most troublesome and often fatal cases I shall not take up the pathology of traumatic gangrene, but shall confine myself to a consideration of its treatment By the term traumatic gangrene as herein used is to be understood that variety of gangrene following severe crushing injuries of the extremities complicated by virulent and often rapidly fatal sepsis

On referring to the literature we find all authorities agree as to the extremely high mortality of this affection Cheyne and Burghard giving it as high as 95 per cent All authorities likewise agree that the only treatment of cases of this class is early amputation above the gangrenous area

How often are we able to determine accurately the limits of the disease particularly in those cases of rapidly spreading moist gangrene? Too often we are disappointed by the continuation of the process after amputation and are compelled to reamputate m[illegible] higher in spite of which the patient of[illegible]

If the gangrenous process does not involve the entire limb the flaps frequently slough, necessitating another operation and the sacrifice of what is too often most valuable tissue so far as the future usefulness of the part is concerned In other cases I have been convinced by subsequent events that in my effort to get well above the disease I have sacrificed tissue which might have been saved In other words, I have amputated at a point higher than was necessary

In casting about for the probable cause of the unsatisfactory course pursued by many of these cases, I became convinced that it was the attempt to form flaps from tissue, the vitality of which is always seriously in question, and the further impairment of that vitality by two procedures necessary to this method of operation first, the dissection of the flaps, second, the introduction of sutures

The dissection of the soft parts into suitable flaps necessarily interferes with their blood supply, which interference in the class of cases under consideration is often badly borne and frequently resented by sloughing of the flaps or the rapid extension of the gangrenous process up the limb The introduction of sutures at this time has two distinct disadvantages first, the retention within the wound of infectious elements which may have traveled up between the muscle planes or along tendon sheaths to a point higher than we may believe probable, second, the further interference with flap nutrition by the tension of the suture, for tension can not be entirely avoided, no matter how carefully the sutures may be placed Believing the statements above made to be true, and that the bearing of these facts on the results secured in these cases was most important, in 1902 I described a method of amputation which had, in my hands, greatly reduced the mortality of traumatic gangrene Since then I have had several opportunities to demonstrate further the value of the method

The procedure is as follows Being confronted with a case of traumatic gangrene of an extremity, estimate as exactly as possible the line between the diseased and healthy soft parts Under anesthesia make a most careful and complete disinfection and cleansing of the skin, puncturing all bullæ and remove all discharges, envelop the gangrenous area in a sterile towel up to the line selected and then, at this point, make a circular amputation, cutting through soft tissues and bone at the same level Ligate carefully all bleeding points, including none of the perivascular tissue in the bite of either the forceps or the ligature Leave the wound open, not introducing a single suture, and apply moist dressings of gauze saturated with salt solution, these dressings to be changed from two to four times in twenty-four hours, as the circumstances of the particular case demand

After seven to ten days, if the wound is perfectly clean and the condition of the patient favorable the classic circular amputation may be made by dissecting up the flap already outlined and sawing the bone at the proper level If for any reason the circular method may seem undesirable, any other procedure may be substituted but in the class of cases under discussion a typical circular amputation will be found entirely satisfactory

It is unnecessary to report in detail the cases treated by this method, but it may be stated that since adopting it in 1900 I have employed it nine times twice in amputations in the subtrochanteric area twice in the middle third of the thigh four times in the upper third of the leg and once in the forearm The results were eight recoveries and one death

The two cases of subtrochanteric amputation will be briefly described as they presented all the difficulties common to the most severe and fatal types of traumatic gangrene

CASE 1—A boy, aged 12, was run over by a disc harrow and the left leg frightfully mangled to condyles of femur Brought to hospital by Dr Evans of Emerson, Neb, on the third day after the accident, at which time gangrene had reached the lower third of the thigh and presented the usual clinical features of traumatic gangrene The patient was delirious, having a temperature of 104 F and a pulse of 136 Amputation as above described was made immediately at a point just below the great trochanter Pulse and temperature reached normal within forty eight hours, delirium had disappeared and the wound appeared clean On the tenth day after the injury tetanus appeared and for four days death was hourly expected Following the usual treatment, complete recovery from tetanus occurred, and two weeks later the flaps were dissected up, the head of the bone disarticulated and good union was secured Since this time the patient has been well

CASE 2—J M, man, aged 40, fell under a slowly moving train and sustained a severe crushing injury of the right foot and ankle He was brought to the hospital thirty six hours later by Dr Langley of Oacoma, S Dak At this time gangrene had extended to the malleoli and the patient's condition was good Not realizing the gravity of the case and thinking that, owing to almost total absence of constitutional symptoms the case was one of ordinary gangrene due to thrombosis, I made a classical amputation just below the knee Twenty four hours later pulse was 110 and temperature 102 F The flaps looked suspicious Thirty six hours later the pulse was 158, temperature 105 5 F, and the patient in a low muttering delirium There was gangrene of the flaps and discoloration to the middle third of the thigh Realizing that prompt separation from the gangrenous and infected leg gave the only chance of life, I decided to reamputate

The patient's condition would not permit use of general anesthesia and, owing to the condition of the limb, local anesthesia was considered inadvisable With no anesthesia whatever amputation through bone and soft tissues as described was rapidly made slightly below trochanter Owing to advanced sepsis the senses of the patient were so obtunded that he gave no evidence of pain except at the moment the knife severed the sciatic nerve Despite the fact that we expected this man to die on the table or soon after, he began to manifest improvement a few hours after the operation In twenty four hours his pulse was 120 and temperature 101 F Forty eight hours later pulse and temperature became normal and so remained Twelve days later, the wound being clean, flaps were dissected up and the bone sawed through at the trochanter and the wound closed Primary union was secured, stitches were removed on the eighth day and the patient was up and about the ward on crutches Was told one day that he might leave the next morning for home and that night died suddenly of pulmonary embolism

The stump was absolutely clear and union perfect This was the most desperately sick patient I have ever seen recover from gangrene and one on whom I could not think of operating by any other method His tragic death after apparently complete recovery was particularly unfortunate and should not be charged against this particular plan of operation, as it might have followed any operation

As my results by the old method can not be compared with those secured by this, I have ventured to present the operation for consideration Its advantages may be summarized as follows

1 By it we may speedily and with the minimum of shock remove from an enfeebled and exhausted patient the source of infection namely, the gangrenous tissue

2 We may frequently make the amputation at a lower point than would be possible by the old method, because

soft tissues whose vascular connections are left undisturbed are less apt to slough

3 The freest possible drainage is provided for a sufficiently long time

4 If the disease stops at the line first chosen, no unnecessary sacrifice of tissue has been made, as the flaps have been defined at the lowest limit of safety, and the bone would necessarily have to be sawn at the same point as at the second operation

5 If the limits of the disease have not been placed sufficiently high, the same procedure may be repeated with less danger to the patient than a typical reamputation

6 Patients too weak and prostrated by sepsis to withstand a typical amputation may endure this much shorter procedure and be built up during the interval before the second operation is necessary

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IS EYESTRAIN EVER AN ETIOLOGIC FACTOR IN EPILEPSY?*

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In reporting the following four cases of epilepsy in which the active causative agent appears to have been eyestrain and in which correction of the refraction errors relieved the greater affection, I am actuated by a desire to aid in promoting the educational work that other ophthalmologists have been doing in this direction, and possibly to benefit some other sufferers, rather than to enter into the dispute regarding the relationship of eyestrain to epilepsy My own observations convince me that an epileptic seizure may be induced by reflex action from an ocular disease There may be some physicians who do not want to be convinced of this, there are certainly some who deny the possibility of the eyes playing any important part in connection with epilepsy, and the great mass of the profession has probably never given any consideration to the matter and would have no answer prepared for the question expressed in the title of this paper

The primary reason for stating the question is that it may serve as the basis for a dispassionate consideration of the subject, for it is an important matter that the proper answer should be determined and, if it be in the affirmative, as many of us believe it will be, it is equally important that the general profession should be so informed and should apply that knowledge for the prevention or alleviation of human suffering It has been estimated that there is one epileptic in every 500 inhabitants in this country, applying that to the city of Baltimore, let us say would mean that we have nearly 1,200 victims of epilepsy, or furthermore about 2 000 in the state of Maryland Surely it is worth while to give serious consideration to any disease that afflicts so many citizens in a community Another most excellent reason for investigating any agency that might, even remotely contribute as a causative factor is found in the fact that when once it is firmly established this disease has a bad prognosis The percentage of patients cured by any or all forms of treatment is extremely small the reports of some institutions in which epileptics are treated would seem to indicate that less than 1 per cent are ever restored to health The saving of an individual, then, from the development of epilepsy or the cure of one in whom the disease had started is like snatching a brand from the burning! If only one case in 100 is found to be due to eye disease and curable by the proper treatment of that organ, it becomes possible to double the present percentage of cures

Whenever one reports the cure of a series of cases of some disease which is admitted to have a grave prognosis and in which the percentage of cures by any treatment is exceedingly small, he may expect skepticism on the part of his hearers and perhaps some doubt as to his diagnoses While the diagnosis in my cases was vouched for by others, I have taken pleasure in fortifying my knowledge of the disease by a recent careful reading of the latest authoritative publication on the subject, i e, Epilepsy and Its Treatment, by William P Spratling, superintendent of the Craig Colony for Epileptics, published in 1904

I may be pardoned for quoting extensively from this book, for Dr Spratling does not advocate the idea that eyestrain bears any relation to epilepsy, and probably did not dream that his book would ever be used to support such a theory I believe, however, that he submits the best of evidence in support of that theory, and that his opposition to the theory in other writings, as well as in his book, is not only unjustified by, but is in defiance of his own observations

What is the etiology and pathology of epilepsy? Regarding its etiology, Dr Spratling says (page 58)

> We may assemble the causes of all epilepsies primarily under two heads Predisposing and Exciting Under the former will be studied the comparatively few factors that prepare the individual to acquire the disease, but which may not actually produce it, under the latter, as many as possible of the numerous factors that actually produce epilepsy with or without the aid of influences that predispose to it
>
> In the majority of cases predisposing and exciting causes play a part and are complemental to each other This well known fact we may illustrate in this way Given an individual in whom epilepsy may be induced under the influence of some irritation of which the climax—i e, the point at which it causes the seizure to appear—is represented by 100 If there are already present 60 of these points from, we will say, a predisposition due to heredity, there will remain but 40 points to be supplied by some exciting cause to bring the disease to light, this exciting cause being, perhaps one of the specific fevers some kind of toxemia, an emotional shock, an acute attack of indigestion, trauma, some reflex irritation or numerous other causes which will be fully described later on In other words, epilepsy etiologically considered is often a symptom complex dependent in the great majority of cases on two variables, either a maximum of inherited influence combined with a minimum of exciting cause, or a minimum of inherited influence combined with a maximum of exciting cause

No one will question the importance of an hereditary predisposition in many cases, especially in those cases of direct hereditary transmission of epilepsy or in which the child acquired its predisposition from a parent who had some other nervous disease, such as alcoholism or insanity The exciting causes are the ones bearing particularly on our question and I would call attention to the list mentioned in the above statement regarding etiology It will be noticed that with the exception of toxemia and trauma all of the exciting causes named must act reflexly Just what that process of reflex action may be is not positively known but it would seem most plausible to assume that through the abnormal function of certain organs toxins may be [illegible] ously injure the delicate struct[illegible]

* Read at the meeting of the Section on Clinical Medicine and Surgery Baltimore City Medical Society Dec [illegible] 1906

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tex when brought into contact with them The same author says on pages 326 and 328

The essential poison in epilepsy is a nuclear poison which shows a special predilection for certain delicately constituted cells of the cerebral cortex, typical of the second layer

The majority of good observers in chemical pathology believe that the blood, sweat, urine and gastric contents are hypotoxic in the interparoxysmal state of epilepsy, hypertoxic just before a fit, at the time of and for a variable period just after the fit

Whether the chemical substance, which, by its poisonous effect on the cerebral cortex produces epilepsy, be carbonate of ammonium or cholin or xanthin or some undetermined autocytotoxin, is of no consequence to us at the present moment. What is of some importance, and seems to be known definitely, is that in certain persons predisposed to the disease any agency which can induce the formation, or liberation, into the circulation, of the necessary poisonous substance in sufficient quantity to cause an epileptic explosion, by its action on the brain cells, may properly be called an exciting cause of epilepsy That the formation or liberation of such poisonous substances may be caused by reflex action is set forth by Dr Spratling in the above-quoted statement concerning the etiology of epilepsy and supported by numerous cases related in his book. The list of reflex exciting causes given there (pages 75-122) are dentition emotional shock, prolonged anxiety, grief or overwork, gastrointestinal disorders, disorders of menstruation either functional or organic, the menopause and pregnancy, masturbation and stricture of the urethra Nasal and ocular diseases are mentioned as having been claimed by some writers as the cause of epileptic attacks in some instances, but he has not seen any cases due to abnormal nasal conditions, and concerning eyestrain, says

I am unable to recall a case of epilepsy in all of my experience in which I felt that defective ocular conditions alone caused the disease

Let us consider some of the above-named admitted excitants which may properly be compared with nasal or ocular affections as reflex causative factors in epilepsy

Dentition—Dr Spratling says of this

It has long been my belief that dentition when severe, and acting on an organism that bears the impress of transmitted weakness of a necessary kind, plays an important rôle in the production of epilepsy in early life

This view is supported by such eminent neurologists as Gowers, Feré, Hammond, Peterson, Clouston and Voisin Surely one would be justified in asking, if dentition, why not eyestrain?

Gastrointestinal Disturbances—Under this heading Dr Spratling says (page 110)

The epilepsies due to derangements of this part of the nutritional system are, in my opinion, of greater importance than they are generally supposed to be By gastrointestinal disorders I do not mean so much to include diseases of the alimentary tract, like chronic diarrhea and ulcers of the stomach as I do acute indigestion and intestinal toxemias Irrespective of the absorption of poisonous matter into the blood from the alimentary canal, the irritation of the peripheral nerves (vis ceral) in this locality may alone cause reflex convulsive phenomena that may persist as epilepsy

Now, if irritation of the peripheral nerves of an organ like the stomach can produce epileptic attacks, why may not irritation of the ciliary nerves of the eye? It can hardly be claimed that the nerves supplying the muscles of the eyes, intraocular and extraocular, are not as constantly employed or as much abused as those of the stomach The eye muscles, the ciliary muscles particularly, are working every waking moment of the individual's life, what an opportunity for irritation when there is an optical defect that must be constantly compensated for by muscle action in excess of that the eye was by Nature designed to endure

Disorders of Menstruation, Onset of Menopause, Pregnancy—The same author is responsible for the assertion that either functional or organic disorders of menstruation may be causative factors in epilepsy, and that occasionally the menopause, pregnancy or maternity marks the onset of epileptic attacks

The pathologic conditions within the abdomen, which may be a factor in causing or increasing the frequency of epileptic seizures, are generally those affecting the ovaries and uterus, the condition having persisted a sufficient length of time to set up reflex nervous symptoms Anterior and posterior displacements of the uterus with the ovaries and tubes bound down by firm adhesions, also constitute conditions productive of reflex symptoms in various parts of the body and may act unfavorably on the patient's epilepsy

I have no doubt whatever of the correctness of all this, but physicians who, by daily experience, are familiar with the serious reflex consequences of eyestrain, such as severe headaches, nausea, vomiting and vertigo, must smile at the notion that slight ovario-peritoneal adhesions or urethral strictures can produce more serious effects on the cerebrospinal system than it is possible for eyestrain to do

Emotional Shock—No less an authority than Gowers attributes epilepsy to shock in many instances and says "Of all the immediate causes of epilepsy the most potent are psychic—fright, excitement and anxiety" Now, it seems to me, that if we admit all the other reflex disturbing agents, as exciting causes in epilepsy, it is perfectly ridiculous to argue against the possibility of eyestrain or nasal irritation assuming the same pathologic rôle No one can read Dr Spratling's report of the investigations made at Craig Colony by Drs Gould and Bennett, and his disputes with Dr Gould thereafter, without being convinced of his unfairness in the matter His own figures do not bear out his conclusions and his prejudice is most strikingly shown in his refusal to consider glasses of curative value in a case which, according to his own statement, had no epileptic attacks during a period of fifteen months after beginning the use of correcting glasses and suffered a recurrence only after those glasses had been broken It is noteworthy that in his book he says of eyestrain, that he has not seen a case in which he felt that "defective ocular conditions alone caused epilepsy" If he means by that to eliminate the predisposing factor, he is begging the question, for it has not been claimed that eyestrain or any other reflex would cause epilepsy in an individual not possessed of that weakened nervous system which predisposes to the disease If he meant, as a casual reader of that sentence is justified in inferring, that eyestrain never produces epilepsy even in a person predisposed to the disease, he is certainly wrong A host of competent observers, mostly ophthalmologists, have now reported cases of epilepsy cured by treatment of the eyes, either by the wearing of glasses or by the operative correction of abnormalities or defects of the eye muscles When such reliable and conservative observers as Drs Samuel Theobald, Myles Standish and Wendell Reber endorse the theory, or report cases of the kind observed, we can not put the question aside as hobby-riding

Dr Theobald very kindly permits me to relate here a case observed in his private practice several years ago In February, 1889, a man 37 years of age, suffering with epilepsy, consulted him because of poor vision and asthenopic symptoms The following glasses were prescribed for constant wear Right eye, + 3 Ds = + 50 Dc Ax. 180, left eye, + 3 50 Ds = + 62 Dc Ax 180, which gave perfect vision and normal muscle balance The patient had been subject to epileptic seizures every three or four weeks and lost at least two days a month from his work In August, 1900, he reported that the epilepsy had been greatly improved since securing the glasses, but that recently the eyes had again become weak and he had suffered a recurrent attack Examination disclosed the necessity for a change in the lenses and in November of the same year he reported a comfortable condition, with only slight nervousness and but one-half day's loss of work in four months

My own clinical experience is as follows

Case 1—Miss E M A., of Wheeling, W Va., aged 18, consulted me at the Johns Hopkins Hospital dispensary in July, 1899 She had been under observation in the neurologic department of the same hospital for some weeks and Dr Thomas, who made the diagnosis of epilepsy, referred the patient to me for an aural examination because of the peculiar aura in the case She gave the history of having had epileptic attacks at frequent intervals for seven or eight years The attacks occurred generally in the night or early morning and were repeated from two to four times a month She awoke with a scream, threw her hands to her ears, attempted to run, and fell unconscious The seizure was typical of epilepsy inasmuch as she emitted the peculiar cry, frothed at the mouth during the attack, usually bit her tongue and passed from the attack into a deep sleep On the following day she was usually very weak and suffered a more or less severe headache The preceding aura consisted in hearing musical sounds and, at times, she complained of tinnitus aurium between the attacks An aural examination failed to disclose anything abnormal about the ears either in structure or function. During the examination she made some remark which caused me to suspect an abnormal condition of the eyes, and without any idea that this bore any relation to the epileptic condition, and with the notion solely of doing something to make her a trifle more comfortable, I prescribed a mydriatic and instituted a careful examination of her refraction As a result of this the following glasses were prescribed Right eye, + 2 50 Ds = 1 Dc. Ax 120, left eye, + 2 50 Ds = + 1 Dc Ax 60 The patient was advised to remain in the city in order that Dr Thomas might have the opportunity of studying her condition, but as she suffered no epileptic seizures during the next two months she was permitted to return to her home I saw her about one year ago and have recently heard from her through a sister who was passing through Baltimore Only once in these seven years has she had an epileptic attack, and that occurred at a time when she sent her glasses to Baltimore for repairs and was kept without them for a week.

Case 2—W M, aged 20, referred to me by Dr W T Watson on April 12, 1902 His family history presents the following points of interest in connection with his trouble, his mother is a nervous woman, although subject to no particular affections, a brother has suffered from epileptic seizures at irregular periods Both of these boys had disliked school life, probably finding study painful, but their eyes had never been examined The patient stated that since 10 years of age he had found it impossible to read or write, especially at night, without great discomfort He had adopted a trade which required pretty close application during the day and secured some recreation in the evening by attending a gymnasium, where he was fond of exercising with the punching bag a form of exercise requiring steady and active employment of the eyes About one week prior to his visit to my office after a hard day's work and an unusually prolonged séance with the punching bag he arrived home feeling rather tired, and was shortly afterward seized by an epileptiform attack. His physician, who lived but a few doors away and answered his call promptly, described this to me as of typical epileptic character An examination under a mydriatic disclosed the existence of 4 50 diopters of hypermetropia in each eye, no astigmatism could be determined either by ophthalmometer or skiascopy and glasses (+ 4 Ds) were prescribed for constant wear I heard nothing more of this young man, except that he had gone west, until this summer, when he came to my office to report that he had never suffered any recurrence of the epileptic attack nor headaches, but that on several occasions when his glasses had been broken, while awaiting their repair he had been more nervous than usual and at such times could not read with comfort

Case 3—Miss E C, of Spencer, W Va, aged 20, consulted me Dec 19 1905 at the instance of her brother, a physician, who knew Miss A., the patient referred to in Case 1 She had been a victim of headaches as long as she could remember, and abandoned school work at the age of 10 years Any effort to study or perform close work of any kind rendered her very miserable Menstruation appeared at the age of 12 years, and shortly after that she began to have epileptic attacks These attacks continued, occurring always during sleep, and having the character of true epilepsy, she emitted the peculiar cry developed spasms, became unconscious, frothed at the mouth, bit her tongue, and relapsed into slumber She would be very weak the next day and suffer intense headache As a general rule, these attacks occurred during the week preceding or the week following her menstrual periods, but her periods were irregular and the number of attacks varied, averaging, however more than two a month Examination of the eyes under a mydriatic gave the following result Right eye, + 2 50 Ds = + 50 Dc Ax 90, left eye, + 1 Ds = + 1 Dc Ax 90 A full correction was prescribed on December 21 and on March 20 1906, I received a letter from her in which she says, "I did not think it necessary to write sooner as I have felt so very well since I left Baltimore My eyes have given me very little trouble since I saw you and I have had but one very slight nervous spell, during which I was not affected as usual but had only slight muscular twitchings, followed by headache for a few hours"

Case 4—Miss N B, of Henderson, N C, aged 19 examined March 26, 1905 at the request of Mrs H, a sister of the patient in Case 1 She was a delicate looking girl, but with no history of hereditary disease of any kind Her mother, who accompanied her, appeared to be of a nervous temperament and a female cousin, daughter of the mother's sister, was reported to be subject to "nervous spells" without convulsions Miss B had been subject to headaches all her life, aggravated by any form of close work and particularly troublesome during the period of school life The privilege of reading or sewing was denied her because of the knowledge that sick headache would surely follow such employment though she had never been informed that her eyes were possibly associated with this disability For five years she had been having "nervous attacks" These began with slight emotional and muscular disturbances In the earlier ones the face showed rapid emotional changes and the twitching of the facial muscles was followed by general restlessness moving the arms aimlessly or walking about the room hastily, during which time she seemed to stare into vacancy she did not completely lose consciousness at such times The attacks became gradually more severe and more frequent during the following year having occasionally as many as eight a day, at the end of which period the first typical *grand mal* epileptic convulsion occurred Occurring always at night these epileptic seizures recurred with varying frequency, but always more than once a month, for four years The convulsion was invariably preceded by a shriek and accompanied by frothing at the mouth and biting of the tongue On the following day she usually suffered from intense headache accompanied by nausea

Inasmuch as the beginning of these nervous spells was coincident with the appearance of menstruation it was thought by the family that her troubles might be of a gynecologic nature but three capable physicians had examined h[illegible] ferent times and agreed [illegible]

ing wrong in that region Treatment by her family physician not proving beneficial, she was induced by the advertisements in a religious paper to try "Mrs Converse's treatment," and for two years she had regularly taken this concoction, probably an expensive solution of potassium bromid Making it clear to the mother that I made no pretense of ability to cure epilepsy, I informed her that, from the history of headaches I considered it important to have the eyes carefully examined and held out in justification of this the hope of greater comfort in life even if epilepsy was not affected by eye treatment A mydriatic was ordered, and on examination by skiascopy the following result was obtained Right eye, + 50 Ds = + 50 Dc Ax. 45, left eye, + 50 Ds = + 50 Dc Ax. 135 An esophoria of 1 degree at infinity and 4 degrees at reading distance was converted into orthophoria by glasses giving a full correction, and with this vision equalled 20/15 I prescribed the above glasses for constant wear and told them that I believed the headaches would be relieved and that she would probably be able to read and sew with comfort, but that I could not encourage them greatly to hope for a cessation of the epileptic attacks, I was skeptical on account of the low degree of refractive error

On May 21, 1906, this patient entered my office, and with much pleasure observed that I did not recognize her The change in her appearance was certainly very marked, and any one might have been excused for not recalling the delicate patient I had first seen She had been on a visit to New York and had stopped on her way home to tell me that she was perfectly well Since she began wearing the glasses she has never had any recurrence of the headaches nor convulsions

When I presented a part of this paper at a recent meeting of the Ophthalmologic Section of the Baltimore City Medical Society, Dr J Frank Crouch, in discussing the subject, related two interesting cases of his own experience, the notes of which he has kindly handed me with permission to publish herewith

CASE 5—Clara K, aged 13, referred by Dr G J Preston in April, 1905 The child for two years had been having severe chorea, for which all ordinary methods of treatment had been tried before she was taken to a specialist on diseases of the nervous system On their first visit, Dr Preston informed the parents that he was going to have all her organs examined in turn to try to find some causal factor, and advised them to consult an oculist first Under atropin I found a hypermetropia of 3 5 diopters in each eye, for which full correction was ordered The child began to improve at once, and at the end of three weeks was entirely free from choreic manifestations I kept her under observation for six months and saw no tendency to recurrence

CASE 6—Mrs Emma Z, seamstress, was sent to me Nov 2 1898, by her physician, on account of severe headaches which occurred whenever any effort was made to use her eyes Under a mydriatic the following defect was discovered and correction ordered Right eye, + 1.25 Dc. Ax 105, left eye, + 3 Ds which glasses gave her 20/20 in the right and 20/30 in the left eye After the mydriatic wore off a test of the muscular balance indicated an exophoria of 4 degrees for distance, which was increased to 8 degrees for near The correction was worn for three months, at the end of which period a tenotomy of the external rectus of the left eye was performed, reducing the exophoria for near work to 1 degree After the tenotomy the patient became entirely comfortable, using her eyes without pain the entire day

"One month after operating she incidentally mentioned the fact that on account of her agitation she had forgotten to take a certain medicine which her physician had been giving to her because of fainting spells, and asked whether the operation could have any influence on her nerves, for she had had no recurrence since discontinuing her drugs a thing which had not been possible for two years I at once called up her physician, Dr Wilmer Brinton to learn the character of the attacks To my inquiries he replied that the woman undoubtedly had epilepsy, having required large doses of bromids for more than two years I kept close watch of this patient, making her report at frequent intervals, and at the end of two years, inasmuch as she had no recurrence of epilepsy, dismissed her"

It seems to me that such cases as the six here reported tend to prove that eyestrain is an exciting cause of epilepsy in persons whose constitutional weakness predisposes them to the disease The removal of one reflex excitant does not, of course, cure the disease, the predisposition is always there, and if the patient be again subjected to eyestrain the attacks will probably recur, or, if the eyes be kept in perfect condition, some other exciting factor, like pregnancy, shock or great anxiety, may precipitate a convulsion Every case of epilepsy certainly deserves a careful examination of all the special organs, the eyes included, by experts for the purpose of ascertaining and eliminating any possible exciting factor

Clinical Notes

REPORT OF A CASE OF REMOVAL OF THE GANGLION OF THE FIFTH NERVE FOR TIC DOULOUREUX

FOLLOWED BY PARALYSIS OF THE SEVENTH NERVE ON THE SAME SIDE

MILES F PORTER, A M, M.D
Surgeon to Hope Hospital, Professor of Surgery in the Medical Department of Purdue University
FORT WAYNE, IND

All cases of excision of the ganglion of the fifth nerve should be reported because of the comparative rarity of the operation, but an additional interest attaches itself to the case here reported because of the motor paralysis which followed

History—F P, male, aged 32, had little of note in his personal or family history, except that his father was an alcoholic The patient lived for a time in Arkansas, but had to move on account of malaria He was unable to take quinin for this disease, as the drug produced a severe hematuria He commenced having attacks of pain in the spring of 1889 For these attacks he was treated medicinally and without relief He also had most of his teeth extracted without, of course, any good resulting therefrom In 1904 the superior maxillary branch of the fifth nerve was excised, the operation gave him relief for a few months, but the pain returned in the latter part of the same year, when the superior maxillary branch was resected for the second time These operations were done by Dr Ross at the Deaconess' Hospital in Indianapolis The last operation gave relief for a short time only

Operation and Result—On Jan 28, 1905, I operated on the superior maxillary branch of the nerve, removing all of that portion of the nerve lying in the infra-orbital canal, and at the same time resected more than two inches of the inferior maxillary nerve Relief from this operation was short, and in November of the same year the patient came to Hope Hospital, where I removed the ganglion A large opening was made in the skull, the dura was lifted, the superior and inferior maxillary nerves were grasped with forceps, pulled well out of their respective foramina and divided The ganglion was then split from before backward between the ophthalmic and superior maxillary trunks and removed The aim was to avoid injury to the ophthalmic division of the nerve. The middle meningeal artery was not injured The hemorrhage, as is usual, was considerable and principally venous, and was controlled by gauze packing After the removal of the ganglion, the wound was closed with buried catgut sutures, a few strands of catgut being used as a drain The eyelids were not sewn together The wound healed by first intention, recovery was prompt, and the man remains, thirteen months after the operation, free from pain Sensation in the cornea was not completely destroyed, but was lessened by the operation On the

day after the operation, a facial paralysis was noticed on the side of the operation. This paralysis proved to be permanent.

Microscopic Examination—The report of the pathologist, Dr B W Rhamy, is as follows "In the section of Gasserian ganglion I find a small amount of leucocytic infiltration, the evidence of a slight chronic inflammation. Also hyperplasia of the interstitial connective tissue, or fibrosis, and some degeneration of ganglion cells, probably from pressure. The condition here is probably the result of chronic hyperemia or inflammation"

Paralysis of the facial nerve, resulting from removal of the ganglion of Gasser, so far as I am aware, has not been reported before There was no evidence of infection about the wound There was no traumatism inflicted that could have involved the trunk of the facial, either inside or outside of the cranial cavity, provided it occupied, in this subject, its usual position But two explanations occur to me, of this unusual sequel, either the paralysis of the facial was a mere coincidence or the course of the nerve was in this subject unusual

Since this report was written, a third explanation of the cause of the facial paralysis was suggested to me by Mr Harold Mouser, a medical student of mine, and I am inclined to regard it as the most probable one He suggested that the facial nerve was traumatized by traction of the chorda-tympani

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INFECTION WITH FLY LARVÆ, *ANTHOMYIA CANALICULARIS*

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SPRINGFIELD, ILL.

An interesting case of infection with this larvæ was brought to my observation in May, 1906, by Dr George E Lyon, Toledo, Ill. With the assistance of Mr N C Gilbert of the University of Wisconsin, a practical zoologist, the identification was made and a search through literature revealed but seventeen cases heretofore reported, as follows Five in America, five in Germany, and the remainder scattered throughout France, England, Sweden and the Argentine Republic, a rather wide range of territory

Anthomyia canalicularis is the larva of the very small black house fly so often seen on windows The flies, which are often found parasitic in man, lay eggs on decaying vegetables, the larvæ varying in size from ⅛ to ¼ inches in length The body proper is long and narrow, has developed lateral branchii or gills, and is divided into segments, ten or fourteen, according to age They are beset bilaterally with feathered bristles two to each segment The larvæ are light brown in color and when passed in the stools are more or less active They invade the intestine and produce alarming symptoms until vomited up or passed with the feces The life of the larvæ in the human intestine is about two weeks They are ingested as eggs and hatched out in the small intestine and are highly resistant to all forms of treatment

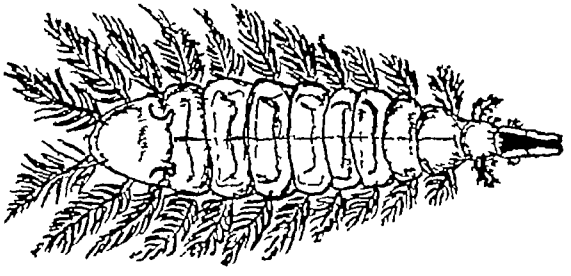
Patient—B B, male aged 30 native of Illinois single, weight 145 pounds, height 5 feet 5 inches, occupation rural mail carrier

Personal History—The patient's habits are good He drank some beer last summer in hopes of gaining relief He takes a glass only occasionally now He lived on farm for twenty years When six or seven years of age he was troubled with *Ascaris lumbricoides* but vermifuges relieved all symptoms The patient was a driver in a livery stable until 27 years old since which time he has been a rural mail carrier He has never been in robust health

Present Illness—Twelve years ago last June the present illness began He felt drowsy for a week or two, and the day after a sixteen mile ride on horseback was attacked with severe abdominal pains, which could not be relieved by home remedies Treatment by a physician (the nature of which the patient does not know), resulted in a bloody diarrhea, followed by constipation This condition existed for several months, and was followed by very severe pains in the region of the liver A diagnosis of pleurisy was made at this time, but the pain continued more or less for about six years, during which interval the patient was markedly constipated. The constipation continued but the pain became transferred from the right hypochondrium to the head, where it existed when the patient was seen. During the past six years the patient has consulted many physicians, has been to various mineral springs and to the dispensary of a medical school, has taken great quantities of "patent medicine," all to no purpose

Examination—Patient's condition in April was as follows Pulse, soft and full, eyes dull, with pupils constantly contracted, respiration normal, temperature normal, appetite indifferent, bowels sluggish, abdomen tympanitic—full even after catharsis Urine high colored, with much uric and hippuric acid Pain, severe, constant headache with pains radiating from lumbar region upward along the spine to base of brain

Treatment—In April this consisted of Potassium citrate, saw palmetto, liquid couch grass, fluid extract corn silk, sandalwood and compound spirits of ether, capsules containing strychnin, arsenous acid podophyllum, salol, monobromated camphor and pepsin This treatment was continued for three weeks and resulted in loss of all pain except frontal headache, but the benefit was only transitory The patient was then lost



Drawing of the larva of *Anthomyia canalicularis* (enlarged) (Braun)

sight of until the middle of May On Saturday, May 19, he began eating raw pumpkin seeds and continued same without food until Tuesday morning, when a saline purge was given At noon on Tuesday he passed about a quart of fecal matter fairly alive with the larvæ of *Anthomyia*, perhaps 1,000 or 1,500 in all He was then put on santonin, calomel and male fern, with no further result than to empty the intestinal tract completely The abdomen decreased five inches in circumference and patient slept during the two following nights better than for months An examination of the urine at this time showed nothing abnormal except some spermatozoa, few in number Three days later a few more larvæ were passed, which showed that the whole colony did not come away at once The patient's condition since June 1, 1906, was about the same He continued to pass a few larvæ from time to time for several weeks after the first evacuation He was then treated for a time by one of the foremost medical men in the middle west, until he located at Colorado Springs, from which place he was reported as improving On January 21, 1907, the patient reported that he was feeling much better and gaining flesh He had just returned from Colorado and engaged in business He reported he was free from headache, but not entirely well although no reference was made to the larvæ

The Evolution of Medical Thought—Medical science is constantly in a process of evolution The apparent truths of today are the fallacies of to morrow, and too often the results of the researches of many years are quickly forgotten—I B Young M D, in the *Bull of Am*

AN AMPUTATION RETRACTOR

O O COOPER, M.D
Chief Surgeon the Hinton Hospital
HINTON, W VA

For years in doing amputations I have felt the need of some sort of efficient retractor to take the place of the two-tailed or three-tailed cloth retractor commonly used The cloth sometimes holds the soft parts away from the saw, but frequently does not, the consequence being that the muscles are shredded or bruised enough to cause sloughing, or, on the other hand, the bone is not sawed off high enough the first time .

No instrument catalogue that I know of shows an amputation retractor of any sort, and the surgeons I

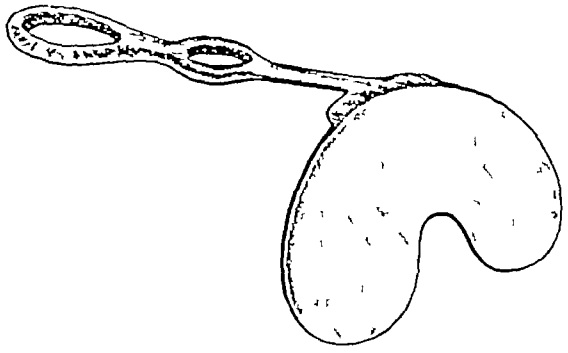


Fig 1 —The amputation retractor

meet have not heard of such a device, so, as far as I know, I have the only pair of amputation retractors in existence At first I used two kidney-shaped pieces of sheet copper cut out by hand By overlapping these around the bone and bending them a little at the periphery to keep one's fingers away from the saw the success of the idea has been demonstrated in numerous amputations Recently I asked Max Wocher & Son, Cincinnati, to follow up my idea and make me a pair of retractors with convenient handles The cuts show the result of their efforts with which I am well pleased

The instruments are used in pairs and each consists of a blade to which a handle is rigidly attached at right angles The convex edge of the blade is a part of a circle six or seven inches in diameter The concave edge is part of a circle one and a half inches in diameter, gradually widening The handles are six and a half inches long and attached to the stump side of the blade so as to leave the saw side of the blade smooth In use, the blades are applied around the bone opposite each other and then overlapped until they fit the bone snugly, when the desired retraction can be made They will fit a bone of any size or two bones of different sizes, as in the leg or forearm By overlapping the blades at various angles the shape of the opening can be modified at will

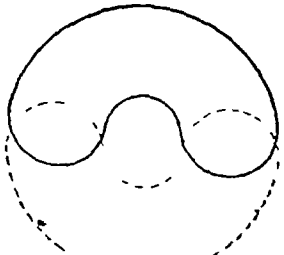


Fig 2 —The overlapping of blades and the opening left for the bone

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The Safe Kind of Whisky—Dr Wiley, of the Department of Agriculture according to *Harper's Weekly*, says that the safe kind of whisky is that which is bottled, "the records show that whisky left in a bottle has never injured anyone seriously."

BITE OF A POISONOUS SPIDER, *LATRODECTUS MACTANS*

ALEXANDER L. HODGDON, M.D
Formerly Professor of Nervous Diseases and Diseases of the Mind Maryland Medical College, Baltimore.
PEARSON, MD

The toxic qualities of the spider that is known as *Latrodectus mactans* are not, I believe, generally known An appropriate name for the spider would be the "T and dot" spider, as the specimen I have seen was coal black with a red T and red dot

Some weeks ago I was called to see a man who, pulling on his boot, had pressed on one of these spiders with the side of his foot The spider's bite at the time caused him but little pain or inconvenience About twenty five minutes after being bitten, however, acute and agonizing pains occurred all over the body, being particularly severe in the region of the chest Aqua ammoniæ was applied locally and also administered, well diluted, internally, and previous to my arrival the patient had taken considerable whisky Morphin sulphate, strychnin sulphate and nitroglycerin were administered hypodermically, and while the latter two drugs may have helped his condition I believe the morphin was of much greater benefit. For about forty eight hours the symptoms were most severe, the most acute pains lasting for about eight hours, the man did not feel entirely well for about ten days

It would seem from this case that the *Latrodectus mactans* must secrete a very concentrated poison which acts, when absorbed, as a direct irritant to the sensory nerves I am interested to know just what the active principles of this poison are

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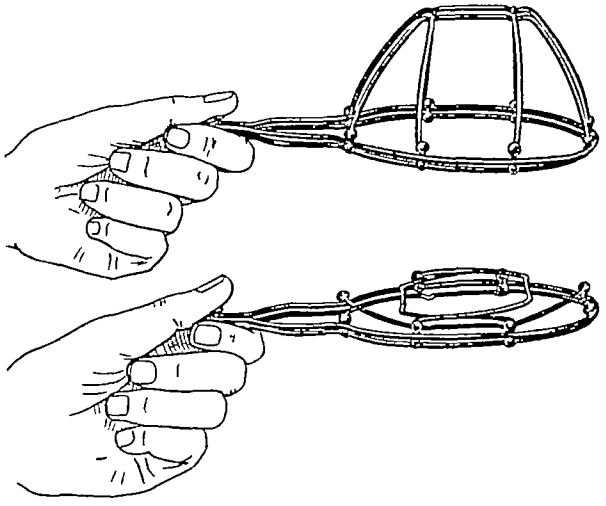
[COMMENT The group of animals referred to belongs in the same subkingdom as the insects, from which they differ, however, in important characters Several species have gained considerable reputation in medicine Probably the most noted spider in this respect is *Tarantula fasciventris* of Italy, the bite of which was popularly supposed to cause the disease tarantismus or tarantula dance Another noted spider is *Latrodectus malmignatus,* which is reported to have produced such fear in Spain in 1830 and 1833 that farmers hardly dared to leave their houses An American species, *Phyddippus tripunctatus,* is reported as causing, by its bite, a swelling, accompanied by great pain, itching and inflammation, chilliness and fever succeed each other in rapid succession and in children and in weak persons convulsions may result, the pain is said to last several days and to disappear only after free perspiration The so-called "bird spiders" of the tropics are nocturnal animals feared because of their poisonous bites, which are very painful, but probably not so dangerous as claimed *Aname hentzii* is a bird spider or tarantula sometimes found in the eastern states, and *A rileyi* is a California species with a still less savory reputation In 1902 Dr H W Crause published in the Transactions of the State Medical Association of Texas accounts of a number of cases of spider bites observed in Texas *Latrodectus mactans* has been charged with numerous serious bites in this country, and while some cases have been alleged to end fatally, many of the accounts lack sufficient details to justify any valid judgment. Dr L O Howard has shown that at least some of the cases may have been due to bites of the piratine bugs Some cases of very severe bites due to *L mactans* seem, however, to be well established It is particularly on the glans penis that persons are bitten, when in box privies —ED]

FOLDING ESMARCH ANESTHESIA MASK

VICTOR F MARSHALL, M.D
APPLETON, WIS

The accompanying illustrations show a modification I have made of Esmarch's anesthetic mask. The hoop wires are supplied with joints at the ring base, thus allowing the hoops to be folded on each other This gives



a flat instrument, which lends itself easily to packing into small compass The modification was worked out owing to the fact that the ordinary surgical and obstetric bags contain too little room Our modern armamentarium is bulky and economy of space is desirable The instrument is simple, durable and compact

A SIMPLE STERILIZER FOR EMERGENCY AND COUNTRY WORK *

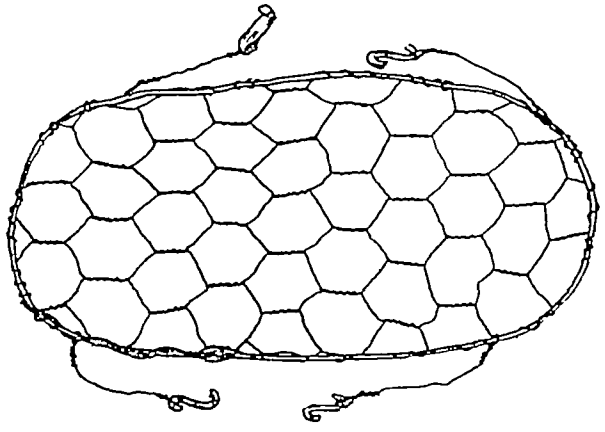
EDWARD S STEVENS, M.D
LEBANON, OHIO

It is one thing to prepare for operative work with the modern pressure sterilizer and other conveniences of the hospital, it is quite another thing to prepare for the same work in a private home, perhaps on a farm at a distance from the operator's office The device offered is purposely presented in a crude form to show what may be done under such circumstances when the element of time is important An instrument maker could give us a more sightly instrument All that is required is a piece of No 9 or 10 wire, a sheet of wire netting, four cords for suspension and an equal number of metal hooks In this case poultry netting was used the cords were wire picture-cord, and the hooks were ordinary picture hooks But any strong cord will answer and a hook may be speedily fashioned from sheet tin or iron

The wire is shaped to fit loosely the inside of the house wash-boiler The wire netting is bent and fastened over this frame the cords are attached near the ends of the straight sides and are of such length as to let the apparatus into the boiler to within a few inches of the bottom, the hooks attached to the upper ends of the cords are placed over the upper rim of the boiler This gives a steam sterilizer with considerable space Boilers are usually found in one of three sizes—most commonly the No 8

In using this simple apparatus a few inches of boiling water are placed in the boiler, the sterilizer is hooked over the rim of the boiler, and dressings, bedding and towels may then be steamed as long as may be desired To prevent the condensation of the steam in the sterilized articles they may be placed for a few minutes in the oven, when they will be found to be dry enough for use

I have found this little apparatus a great time-saver

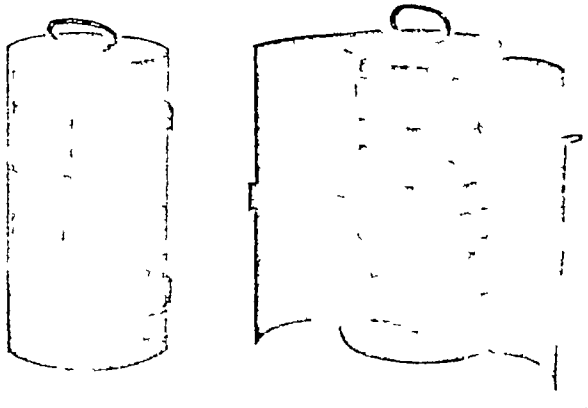


when called on for work which allowed little time for preparation It is also a convenient article for the nurse who is sent ahead to prepare for the coming of the surgeon By folding the cords and hooks over the wire netting it may be packed flat and is easily carried

AN IMPROVED PETRI DISH HOLDER *

HAROLD O RUH
Assistant in Pathology Indiana University
BLOOMINGTON, IND

Any one who has attempted bacteriologic work involving the use of a large number of Petri dishes, has regretted the lack of a satisfactory Petri dish holder No holder, satisfactory for the various procedures of sterilization, storage, plating and incubation is on the



market To supply this defect there has been designed the holder here presented

The figure is self-explanatory The instrument is made of heavy tin galvanized iron or other material that will withstand an ordinary amount of heat and moisture, and is made with pressed joints without solder The apparatus has been found satisfactory so far as tested

* Presented at the January meeting of the Warren County (Ohio) Medical Society

* From the Pathological Laboratory of

THE ATLANTIC CITY SESSION

American Medical Association, Fifty-Eighth Annual Session, Atlantic City June 4-7, 1907

OFFICIAL CALL

THE FIFTY EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, TO BE HELD AT ATLANTIC CITY, N J, JUNE 4 7, 1907

To the Officers and Members of the Constituent State and Territorial Associations of the American Medical Association

The fifty eighth annual session of the American Medical Association will be held at Atlantic City, N J, on Tuesday, Wednesday, Thursday and Friday, June 4, 5, 6 and 7, 1907

THE HOUSE OF DELEGATES

The House of Delegates of the American Medical Association will convene at Atlantic City, N J, at 10 a m, on Monday, June 3, 1907 The representation in the House of Delegates of the various constituent associations for the years of 1907, 1908 and 1909 will be as follows

Alabama	3	Montana	1
Arizona	1	Nebraska	2
Arkansas	2	New Hampshire	1
California	3	New Jersey	3
Colorado	2	New Mexico	1
Connecticut	2	New York	11
Delaware	1	Nevada	1
Dist. of Columbia	1	North Carolina	3
Florida	1	North Dakota	1
Georgia	2	Oklahoma	2
Hawaii	1	Oregon	1
Idaho	1	Pennsylvania	8
Illinois	7	Rhode Island	1
Indiana	4	South Carolina	2
Iowa	3	South Dakota	1
Kansas	3	Tennessee	2
Kentucky	3	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	3
Massachusetts	6	Washington	1
Michigan	4	West Virginia	1
Minnesota	2	Wisconsin	3
Mississippi	2	Wyoming	1
Missouri	4	Philippine Islands	1
Ohio	6		

The twelve sections of the American Medical Association the Medical Department of the Army the Medical Corps of the Navy and the Public Health and Marine Hospital Service are entitled to one delegate each

FIRST GENERAL OR OPEN MEETING

The first General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10 30 a m, Tuesday, June 4

REGISTRATION DEPARTMENT

The Registration Department will be open from 8 30 a m until 5 p m, on Monday, Tuesday Wednesday and Thursday June 3, 4, 5 and 6 and from 9 to 10 a m on Friday, June 7

WILLIAM J MAYO, President
CHARLES H SIMMONS General Secretary

PRELIMINARY PROGRAMS OF SECTIONS

The Papers to be Read at Atlantic City—Announcement About the Official Program

The following is a partial list of titles of papers to be read before the various sections at Atlantic City Some other papers are also announced to be read, but the titles have not yet been received. The order here is not necessarily the order which will be followed in the Official Program This Official Program will be similar to those issued in previous years and will contain the final program of each section, with abstracts of the papers, lists of committees, programs of the General Meetings and of the meetings of the House of Delegates, lists of entertainments, map of Atlantic City, etc To prevent misunderstandings and to protect the interests of advertisers, etc, it is here announced that this Official Program will contain no advertisements It is copyrighted by the American Medical Association and will not be distributed before the session A copy will be given to each member on registration

SECTION ON PRACTICE OF MEDICINE

CHAIRMAN, T D COLEMAN, AUGUSTA, GA, SECRETARY, JOSEPH L. MILLER, CHICAGO

The Early and Premonitory Symptoms of Progressive Pernicious Anemia John A Lichty, Pittsburg

Joint Meeting with the Sections on Surgery, Pathology and Physiology

The Physiology of the Thyroid Gland in Its Relation to Exophthalmic Goiter S P Beebe
The Pathology of Exophthalmic Goiter W G MacCallum, Baltimore
The Diagnosis of Exophthalmic Goiter Lewellys F Barker, Baltimore
Passive Hyperemia of the Lungs and Tuberculosis Wilder Tileston, Boston
Some Observations on Digestive Condition in Pulmonary Tuberculosis James Rae Arneill, Denver
Investigation of the Continued Fevers of Southern Georgia H. F Harris, Atlanta, Ga
Medical Treatment of Exophthalmic Goiter Robert B Preble, Chicago
The Surgical Treatment of Exophthalmic Goiter Prof Albert Kocher, Berne, Switzerland

The Abdominal Symptoms of Thoracic Disease Allen A Jones, Buffalo
Cardiac and Vascular Accompaniments of Diabetes Mellitus Arthur R. Elliott, Chicago
The Venous Pulse and Some of Its Applications L. C Grosh, Toledo, and Arthur R. Cushny, London, Eng
The Tone of the Respiratory Center in Tabes Dorsalis C F Hoover, Cleveland
The Study of Gastrointestinal Tract by Means of the Roentgen Rays G E Pfahler, Philadelphia

Joint Meeting with the Section on Pharmacology and Therapeutics

The Etiology of Acute Articular Rheumatism Rufus I Cole Baltimore
Symptomatology and Diagnosis of Acute Articular Rheumatism Philip King Brown, San Francisco
The Cardiac Complications of Acute Articular Rheumatism Alexander Lambert, New York City

Observations on Plague in India Illustrated by Lantern Slides Judson Daland, Philadelphia
The Opsonic Theory and Therapeutic Inoculation with Bacterial Vaccines G W Ross, Toronto
A Critical Estimate of the Fermentation—Specific Gravity Method of Quantitating Sugar in Diabetes Henry A Christian, Boston
Prepared and Predigested Foods Graham Lusk, New York City
Experimental Anemia C H Bunting, Charlottesville Va
The Uncinarial Anemia of Porto Rico Bailey K. Ashford and W W King Washington, D C
Differential Diagnosis of the Various Types of Anemias Richard Cabot, Boston
Treatment of Anemia S J Meltzer, New York

SECTION ON SURGERY AND ANATOMY

Chairman A D Bevan, Chicago, Secretary, Harvey Cushing, 3 West Franklin Street, Baltimore

Chairman's Address The Responsibility and Training of the Modern Surgeon Arthur Dean Bevan, Chicago
Intestinal Perforation in Typhoid Fever Its Surgical Treatment, with Report of a Case. J E Allaben, Rockford, Ill
An Operation for Exstrophy of the Bladder John T Bottomley, Boston
Subphrenic Abscess as a Complication of Appendicitis D N Eisendrath, Chicago
Osteoplastic Operations Prof E Küster, Marburg, Germany
How May Our Present Methods of Medical Illustration be Improved? Max Brodel, Baltimore
Gall Duct Obstruction Caused by Movable Kidney Martin B Tinker, Ithaca, N Y
The Technic of Appendectomy John A Wyeth New York
The Operation of Gastrojejunostomy and Its Physiologic Results Hobart J Peterson London, Eng
Vaccine Therapy of Surgical Infections Controlled by the Opsonic Index, Reports of Results L L McArthur Chicago
The Pelvic Articulations with Reference to the Differentiation Between Lesions of These Articulations and the Many Pelvic Disorders Joel E Goldthwait, Boston
The Methods of Treating Tuberculous Joint Disease John Ridlon Chicago
Personal Surgical Errors, Foreign Bodies in the Peritoneal Cavity, Etc Archibald MacLaren, St Paul, Minn
Local Anesthesia in General Surgery James F Mitchell, Washington, D C

Special Session on Ileus

Colic. Prof K G Lennander, Upsala Sweden
Experimental Studies of Intestinal Obstruction R D McClure Baltimore.

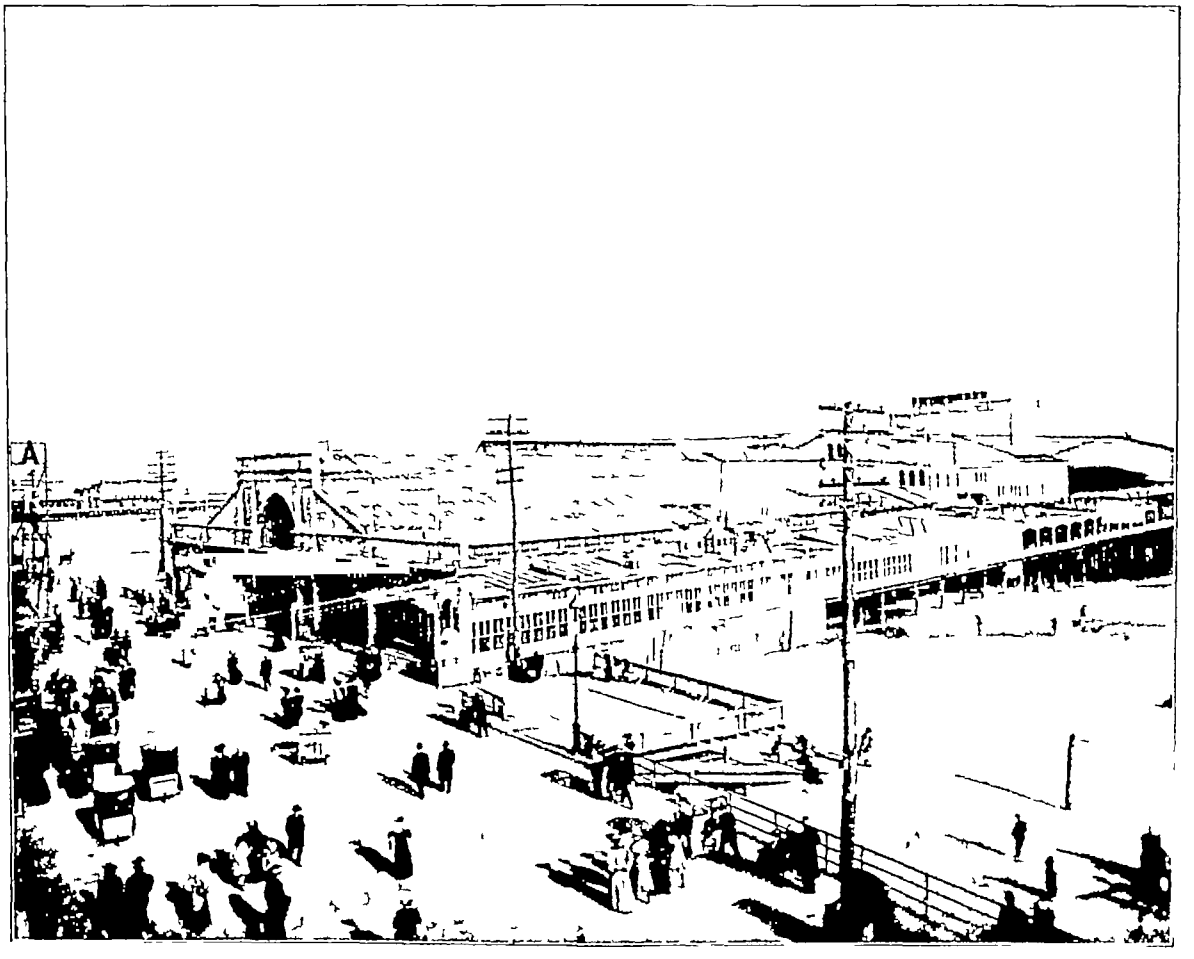


Fig 1—Young's Pier—Bureau of Registration and Exhibit Halls. (These illustrations are reproduced from copyrighted photographs kindly furnished by Harper B Smith photographer Atlantic City)

Bier's Treatment (Stauungs Hyperæmie) in Chronic and Acute Surgical Infectious Diseases Willy Meyer, New York

Combined Section Meeting on Exophthalmic Goiter

The Physiology of Exophthalmic Goiter S P Beebe New York
The Pathology of Exophthalmic Goiter W G MacCallum Baltimore
The Diagnosis of Exophthalmic Goiter L F Barker, Baltimore
Medical Treatment of Exophthalmic Goiter Robert B Preble Chicago
The Surgical Treatment of Exophthalmic Goiter Dr Albert Kocher, Berne Switzerland

Physiologic Observations on Experimentally Produced Ileus Walter B Cannon and J T Murphy Boston
The Relation of the General Practitioner to Strangulated Hernia John B Roberts Philadelphia
Postoperative Ileus Frank Martin Baltimore
Dynamic Ileus John C Munro Boston
Resection for the Relief of Intestinal Obstruction W J Mayo Rochester Minn

Trigger Finger Robert F Weir New York
Excision of the Rectum Sigmoid and Part of Descending Colon with Implantation of the Colon into the Anus Edward Archibald Montreal Canada
The Direct Transfusion of Blood [illegible] Cleveland Ohio

Diabetes in Surgical Relations A E Halstead, Chicago
Experimental Pathology and Surgical Treatment of Erysipelas Ernest Laplace, Philadelphia
Removal of a Migrating Urinary Calculus from the Concavity of the Ileum W D Haggard, Nashville, Tenn
Technic of Operation for Cancer of the Breast Miles F Porter, Fort Wayne, Ind
The Paraffin Injection Treatment of Inguinal Hernia M L Harris, Chicago
A Case of Benign Melanosis J Clark Stewart, Minneapolis
Anatomy of the Palate, Normal and Cleft Truman W Brophy Chicago
The Management of Dislocation at the Shoulder Joint Complicated by Fracture of the Neck of the Humerus H V Royster, Raleigh N C
The Treatment of Acute Articular Infections John B Murphy Chicago
The Results of the Operative Treatment of Deformed Fractures Carl Beck, New York

SECTION ON OBSTETRICS AND DISEASES OF WOMEN

CHAIRMAN, J WESLEY BOVÉE WASHINGTON, SECRETARY W P MANTON, DETROIT

Sub total Abdominal Hysterectomy, with Total Excision of the Gland Bearing Tissue of the Cervix and a Perfected Restoration of the Supporting Ligaments William F Metcalf, Detroit
Plastic Surgery of the Pelvic Structures Henry O Marcy, Boston
Buried Sutures and Ligatures, Their Material and Proper Use Walter B Chase, Brooklyn
Some Advances in Ureteral and Renal Surgery Charles Lester Leonard, Philadelphia
The Surgical Treatment of Ureteral Calculus in the Female Edgar Garceau, Boston
Cystocele Charles P Noble, Philadelphia
Salpingitis Caused by Appendicitis I S Stone, Washington
A Simplified Method of Operating for Cystocele D Todd Gilham, Columbus
The Early Diagnosis of Tubal Pregnancy Philander A Harris, Paterson, N J
Constitutional Ill Equipment of the Patient as a Factor in Determining the Performance of the Primary Cesarean Section Edward Reynolds, Boston
The Induction of Labor to Prevent Dystocia from Excessive Size of the Child William S Stone, New York

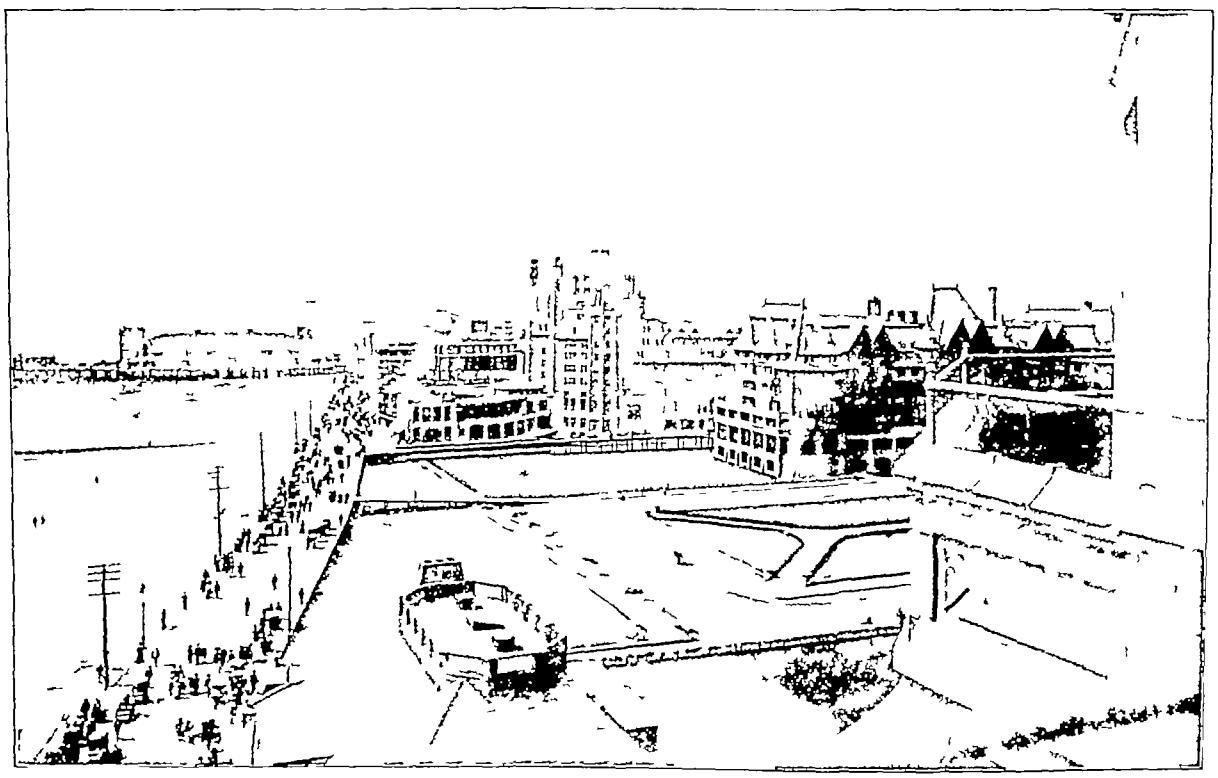


Fig. —The Marlborough Blenheim the million dollar pier and the City Park

Chairman's Address The Status of the Fight Against Cancer of the Uterus J Wesley Bovee Washington
How Can We Lessen the Mortality of Uterine Cancer? E E Montgomery, Philadelphia
Parasitic Uterine Myomata Thomas S Cullen Baltimore
Prevention of Peritoneal Adhesions by Adrenal Salt Solution with Especial Reference to the Pelvis Emery Marvel Atlantic City N J
Postoperative Intestinal Obstruction C C Frederick Buffalo
The Prevention and Treatment of Postoperative Intestinal Obstruction Daniel H Craig Boston
Successful Treatment of Acute Postoperative Ileus by Incision and Drainage of the Intestine with Report of Four Cases Francis D Donoghue Boston
Ovary and Ovarian Tumors in the Inguinal Canal, Rare Condition Report of Two Cases J H Carstens, Detroit
Prolapse of the Ovary and Its Treatment George Gray Ward, Jr., New York
Gonorrhea in Women H J Boldt New York
Unrecognized Gonorrhea in the Female S W Bandler, New York
Surgical Treatment of Puerperal Infection George H Noble, Atlanta, Ga
Examination of Gynecologic Patient A H Goelet, New York
The Syncytium Laura H. Branson, Iowa City, Iowa
Uterine Sarcoma Ellice McDonald, New York.

SECTION ON OPHTHALMOLOGY

CHAIRMAN, C C SAVAGE, NASHVILLE, TENN, SECRETARY, ALBERT E BULSON, JR, FORT WAYNE, IND

Chairman's Address G C Savage, Nashville, Tenn
Address What America Has Done for Ophthalmology Alvin A Hubbell, Buffalo
Address What Europe Has Done for Ophthalmology R. A Reeve, Toronto, Can
Address Modern Views on Physiology and Pathology of Accommodation Prof Carl Hess, Würzburg, Germany
Cataract Extraction (I) Is the Case Operable? (II) Preparation of the Patient, (III) The Anesthetic. E E Jack, Boston, Mass

The Incision for the Extraction of Cataract and the Iridectomy John E Weeks, New York City
The Delivery of the Lens for the Extraction of Cataract, Irrigation of the Anterior Chamber, and the First Toilet of the Wound L Webster Fox, Philadelphia
The Immediate After Treatment of Cataract Operations (with bandage) William H. Wilder, Chicago
The Immediate After Treatment of Cataract Operations (without bandage) J W Scales, Pine Bluff, Ark
Operations for Secondary Cataract Peter A Callan, New York City
Does the Opacity of Incipient Cataract Ever Regain Transparency? Leartus Connor, Detroit
Concerning Loss of Vitreous Humor in the Operation for the Extraction of Cataract J M Ray, Louisville, Ky
Yeast Cells as a Probable Cause of Ulcerative Keratitis George F Keiper, Lafayette, Ind
Ligation of the Common Carotid Artery for Malignant Recurrent Hemorrhage of the Vitreous George S Derby, Boston, Mass
Neuro Fibroma of the Orbit, Kronlein Operation W R. Parker, Detroit, Mich
Metastatic Conjunctivitis in Gonorrhea James J Carroll, Baltimore
The Preventive Treatment of Transferred Ophthalmitis (so called Sympathetic Ophthalmia) Charles A Oliver, Philadelphia
Premiums Paid to Experience (The Results Obtained in Private Practice from Therapeutic Measures Compiled from a Statistical Study of 5,000 Cases) F T Rogers, Providence R. I
The Value of Tuberculin TR as a Diagnostic and Therapeutic Agent in the Recognition and Treatment of Tuberculosis of the Eye With Report of Cases Charles S Bull, New York City
The Relation of the Circumlental Space to the Causation of Glaucoma as Shown by the Würdemann Lamp John A Tenney, Boston
Comparative Potency of Hyoscine and Scopolamin Hydrobromid in Refraction Work Wendell Reber Philadelphia
The Surgical Treatment of Chronic Glaucoma S D Risley, Philadelphia
The Parabolic Reflector for Illuminating Test Charts Mortimer Frank Chicago
The Treatment of Ulcers of the Cornea H Bert Ellis, Los Angeles
The Treatment of Purulent Ophthalmia George H Price, Nashville Tenn

Fig 3—Thousands at play in the surf and on the strand A typical bathing scene

Some Considerations in the Treatment of Lachrymal Obstruction Mark D Stevenson, Akron, Ohio
A Method of Performing Tenotomy which Enables the Operator to Limit the Effect as Required Frank C Todd Minneapolis
The Treatment of Strabismus in Young Children A R Baker Cleveland, Ohio
The Congenital Palsies of Eye Muscles William C Posey Philadelphia
Ocular Rotations in Paresis Francis Valk New York City
Ocular Neurasthenia Hiram Woods Baltimore
A Protest Against the Employment of Paraffin Injections Near the Eyes A L. Davis New York City
Further Observations on Retinitis Punctata H Gradle Chicago
Myopia Associated with Opacities of the Cornea W L Pyle Philadelphia
Indications for the Employment of Adrenalin Chlorid in Connection with Cocain in Operations on the Eye Samuel Theobald Philadelphia
The Treatment of Iritis F C Ellett Memphis Tenn
The Treatment of Interstitial Keratitis H H Martin Savannah Ga
The Treatment of Recent Trachoma Thomas A Woodruff Chicago
The Treatment of Chronic Trachoma A F Prince Springfield, Ill

SECTION ON LARYNGOLOGY AND OTOLOGY

CHAIRMAN, S MACCUEN SMITH PHILADELPHIA SECRETARY W SOHER BRYANT NEW YORK CITY

Chairman's Address S MacCuen Smith Philadelphia
Address Prof Gustav Killian Freiburg
Chemistry of the Salivary and Nasal Secretions and Its Relation to Hay Fever D Braden Kyle Philadelphia
Etiology and Recent Treatment of Hay Fever H Holbrook Curtis New York
Address Prof Theodore Gluck Berlin

Ana omy of the Middle Turbinate Hanau W Loeb, St Louis
Pathology of the Middle Turbinate Joseph L Goodale, Bos ton
Non operative Treatment of Middle Turbinate Diseases Jo seph A Stucky Lexington, Ky
The Indications for Resection of the Middle Turbinal Will iam E Casselberry, Chicago
Technic of the Operation for Removal of the Middle Turbin ate George L Richards, Fall River, Mass
Pathologic Results of Operations on the Turbinates Francis R. Packard, Philadelphia
The Treatment of Hypertrophic and Intumescent Rhinitis with the Galvano Cautery E Fletcher Ingals and Stanton A Friedberg, Chicago
The Larynx in Locomotor Ataxia W G B Harland, Philadel phia
Intranasal Suture Sidney Yankauer, New York
Demonstrations of Gastroscope Chevalier Jackson, Pittsburg
A New Method for All the Ordinary Sequences of Anesthesia Victor C Pederson, New York
The Indications for Operative Interference in Central Affec tions Due to Middle Ear Suppuration Cullen F Welty, San Francisco
Phlebitis Following Middle Ear Disease James F McKernon, New York
Unexpected Aural Effects of a Few Ordinary Drugs George B McAuliffe, New York

SECTION ON DISEASES OF CHILDREN

CHAIRMAN, J R. SNYDER, BIRMINGHAM, ALA , SECRETARY, A H WENTWORTH, BOSTON

Chairman's Address The Status of the Child J Ross Sny der, Birmingham, Ala
Some Needs of Institution Children John Ruhrah, Baltimore
The New Era in Pediatrics, Its Causes and Scientific Founda tions G R. Pisek, New York
The Relation of the Physician to Defective School Children W C Hollopeter, Philadelphia

Fig 4 —The new Traymore and Brighton Casino

The Pathology of Middle Ear Suppuration Henry O Reik Baltimore
Acute Middle Ear Suppuration Norval H Pierce Chicago
Conservative Treatment of Chronic Suppuration of the Middle Ear Samuel Theobald Baltimore
The Cleansing Treatment of Chronic Middle Ear Suppuration W Sohier Bryant New York
Ossiculectomy in Chronic Middle Ear Suppuration Frederick L Jack Boston
Some Important Surgical Relations of the Temporal Bone George F Shambaugh Chicago
The Major Operative Treatment of Middle Ear Suppuration and the Indications for the Same Edward B Dench, New York
The Furtherance of Natural Repair with Reference to the Preservation of Hearing in Suppurative Otitis Media Clarence J Blake Boston
A Preliminary Report on the Etiology of Infantile Atrophy A H. Wentworth, Boston
The Greatest Menace to Whole Milk in Cities' Supply Alex ander McAllister, Camden
Certified Milk and the General Milk Supply of Louisville Henry Enos Tuley, Louisville
The Ferments of Milk and Their Relation to Pasteurization Roland G Freeman, New York
The Disadvantages of Low Proteids in Infant Feeding Alfred Hand, Jr, Philadelphia
The Relation of Pathologic Conditions of the Nasopharynx to the Dental Arches E A Bogue, New York
Adenoids in Infancy John Lovett Morse, Boston
The Opsonic Index in the Tuberculosis of Children Its Rela tion to the Tuberculin Test Thomas Morgan Rotch, Bos ton

Prophylaxis in Cerebrospinal Meningitis A Seibert, New York.
The Early Recognition of Pneumonia in Infants and Young Children and Its Treatment W P Northrup, New York
Empyema in Children Melvin W Franklin, Philadelphia
The Importance of the Early Recognition and Treatment of Rachitis Thomas S Southworth, New York
Tardy Malnutrition, Its Treatment by Rest and Diet Charles Gilmore Kerley, New York
So called Scrofula in Children C F Wahrer Fort Madison
Symptom Complex of a Series of Intestinal Cases in Children with Pathologic Findings Thomas D Parke, Birmingham
Four Hundred and Fifty Cases of Whooping Cough Treated by Means of the Abdominal Belt Theron Wendell Kilmer, New York
Urinary Infections in Infancy Isaac A Abt, Chicago
Enteroptosis in Children W J Butler, Chicago
Observations on Malformations of the Rectum and Imperforate Anus Samuel W Kelley, Cleveland

SECTION ON STOMATOLOGY

Chairman, M I Schamberg, New York, Secretary, Eugene S Talbot, Chicago

Chairman's Address M I Schamberg New York City
The Necessity of a Medical Education for Dentists
(a) From the Standpoint of the Lay Public M L Rhein New York City, H C Register, Philadelphia, and James McManus, Hartford, Conn
(b) From Standpoint of Physician V A Latham, Chicago
The Common Ground of Dentistry and Medicine F L. Fossume, New York City
The Mutual Developmental Dependence of the Upper Air Tract, the Jaws the Teeth the Face and Their Economic Importance to the Human Race W Sohier Bryant, New York City
The Relation of Upper Respiratory Obstruction to Oral Deformity, Simultaneous Treatment by Expansion of the Dental Arch Francis A Faught, Philadelphia

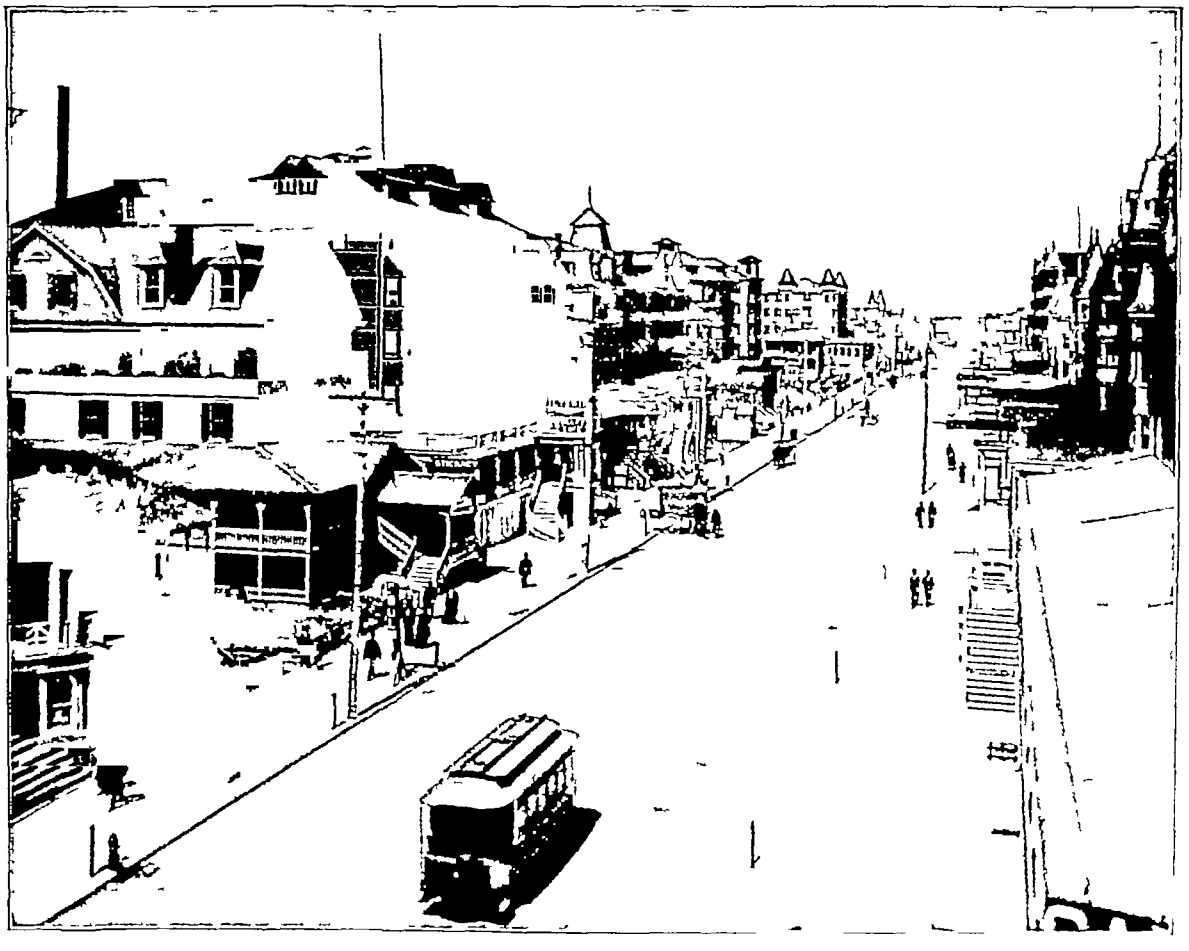


Fig —Virginia Avenue A street of hotels and boarding houses

Clinical Observations in the Acute Infectious Diseases with Bedside Notes from the Willard Parker Hospital Practical Deductions with Therapeutic Suggestions Louis Fischer New York
A Case of Spasmodic Stricture of the Esophagus Samuel S Adams Washington
An Interesting Case of Incontinence of Feces in an Undersized Boy of Six Years Maurice Ostheimer Philadelphia
The Percussion of the Chest in Infants and Children S McC Hamill Philadelphia
Essential Insufficiency of the Heart in Childhood Arthur Willard Fairbanks Boston
Differential Diagnosis Between Measles and Rötheln H M McClanahan Omaha
The Diagnosis and Treatment of Convulsions in Children H Lowenburg Philadelphia
Scarlatina and Dukes' Disease A C Cotton Chicago
Speech Results of Cleft Palate Operations George V I Brown, Milwaukee
Technic of Lip and Palate Operations Thomas Dillebrown Boston
False Statements Concerning Causes of Pathologic Condition S B Tuckie, Chester Pa
Acid Autointoxication the Principle Cause of Erosion and Abrasion Eugen S Talbot Chicago
Some Results from Orthodontia on the Deciduous Teeth J A Bogue New York City
Osteomyelitis of the Maxilla Samuel J Goldsmith New York
A Case of Epidermoid Carcinoma of the Inferior Maxilla W H Potter Boston
Pregnancy A Factor in the Etiology of Dental Disease James E. Power Providence R I
The Dentist in the United States Navy Richard Crayle Annapolis

The X Ray an Aid to the Stomatologist R. G Richter, Milwaukee
Radiography in Oral Surgery, with Demonstrations of a Focus Finder and Ray Localizer G E Pfahler, Philadelphia

SECTION ON CUTANEOUS MEDICINE AND SURGERY

CHAIRMAN, R R CAMPBELL, CHICAGO, SECRETARY, M L HEIDINGSFELD, CINCINNATI

Chairman's Address R R. Campbell, Chicago
Deformities of the Vulva from Early and Late Indurating Edema R W Taylor, New York City
Ten Years' Experience with the Injection Treatment of Syphilis, W S Gottheil, New York City
Syphilitic Varicella David Lieberthal, Chicago
Blastomycosis in an Infant J B Kessler, Iowa City, Iowa
Significance and Treatment of Itching L Duncan Bulkley, New York City
The Present Status of Phototherapy Jay F Schamberg, Philadelphia
An Exhibition of a Case J V Shoemaker, Philadelphia
Pemphigus Joseph Zeisler, Chicago
Pemphigus Neonatorum O H Foerster, Milwaukee
Opsonic Therapy in Skin Diseases H R. Varney, Detroit
Onychomycosis A Ravogli, Cincinnati
Roentgen Ray Technic in Dermatology M K Kassabian, Philadelphia
The Therapeutics of Tuberculous Lesions of the Skin Granville MacGowan, Los Angeles
Treatment of Acne and Chronic Eczema R H Boggs, Pittsburg

SECTION ON PATHOLOGY AND PHYSIOLOGY

CHAIRMAN, WALTER L BIERRING, IOWA CITY, IOWA, SECRETARY, WALTER B CANNON, BOSTON

Chairman's Address The Need of Medical Cooperation in Laboratory Work Walter L. Bierring, Iowa City, Iowa

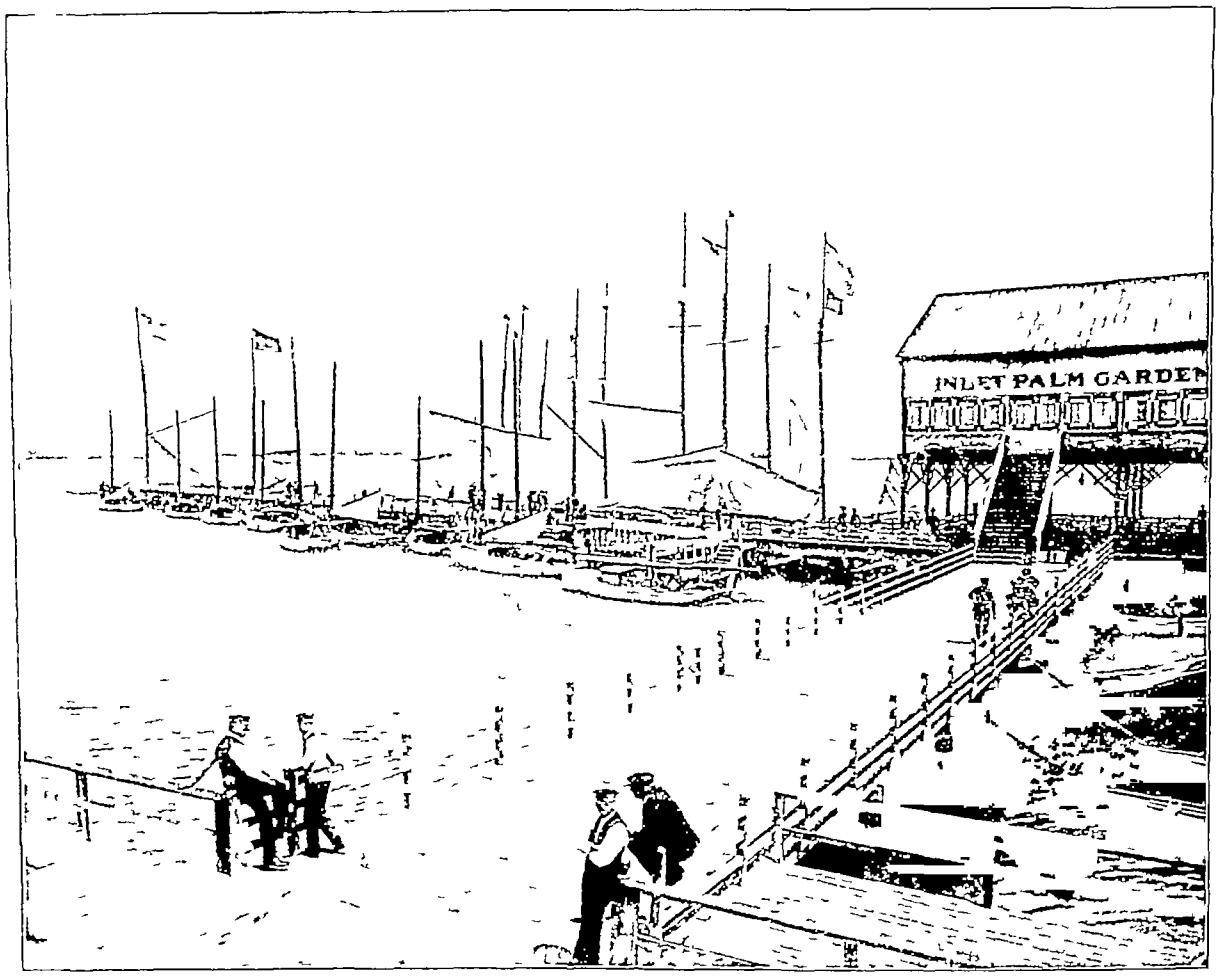


Fig. 6—Inlet Yacht Wharf at the end of the Boardwalk

Report of a Series of Cases of Small Pustular Scrofulide (Duhring) J Frank Wallis Norristown, Pa
Report of a Case of Miliary Tuberculosis of the Skin Grover William Wende Buffalo N Y
Seborrhoids of Face M F Engman and W H Mook St Louis
Lichen Scrofulosorum in America H G Anthony, Chicago
The Vessel Changes and Other Histologic Features of Cutaneous Syphilis J A Fordyce New York City
The Differential Diagnosis of Syphilis (Illustrated by Lantern Slides) W T Corlett Cleveland
Lupus Erythematosus Clinical and Pathologic Considerations (Demonstrated from Lantern Slides) M L. Heidingsfeld Cincinnati
Trichopathophobia A D Mewborn New York City
Liquid Air in Dermatology Its Indications and Limitations H H Whitehouse New York City
The Occurrence of Typhoid Bacilli in the Stools of Typhoid Patients, with a Discussion of the Pathogenesis of Typhoid Fever J H Pratt, F W Peabody and A D Long, Boston
Proteid soap Compounds and Microchemical Reactions of Pure Fats and Lipoids with Sudan III and Scharlach R. L K. Baldauf, Albany, N Y
Recent Work on the Mechanism of Urine Formation Torald Sollmann, Cleveland, Ohio
Observations on the Rate of Elimination of Uric Acid in Man Lafayette B Mendel and Ernest W Brown, New Haven, Conn
Further Observations Concerning Metabolism in Acute Leukemia and Purpura Hemorrhagica David L. Edsall, Philadelphia
Specific Nature of Opsonins Joseph McFarland, Philadelphia

A Demonstration of the Value of the "Nephelometer" in Making Opsonic Estimations Joseph McFarland, Philadelphia

The Opsonic Index in Experimental Infection L Hektoen

The Determination of the Alkalinity of the Blood H M Adler, Boston

The Determination of the Molecular Concentration of Blood Plasma J H Young, Boston

A Quantitative Method for the Determination of the Acetoacetic Acid in Urine O F Black, Boston

A New Indicator for Free Mineral Acids H M Adler Boston

Experimental and Clinical Observation on Chronic Valvular Disease in the Dog Harvey W Cushing, Baltimore

Joint Meeting with the Section on Practice of Medicine

The Physiology of the Thyroid Gland in Its Relation to Exophthalmic Goiter S P Beebe New York City

Adenomyoma of Uterus Thomas S Cullen Baltimore

Diffuse Carcinoma of the Stomach, Esophagus and Duodenum Henry A Christian, Boston

Further Study of Peptic Ulcer Fenton B Turck Chicago

Coagulation Necrosis D H Bergey, Philadelphia

Joint Meeting with the Scientific Exhibit

The Movements of the Esophagus After Bilateral Vagotomy W B Cannon, Boston

Experiments on Gastric Secretion L Kast New York

Experiments with the Proteolytic Ferments Joseph Sailer and C B Farr, Philadelphia

Experimental Study of a Probable Internal Secretion of the Salivary Glands John C Hemmeter Baltimore

Simultaneous Sphygmomanometric Pressures as Modified by Posture Winfield Scott Hall and A H Sanford Chicago

A Further Contribution to the Physiology of the Suprarenal F C Busch Buffalo

Fig 7—The Atlantic Yacht Club

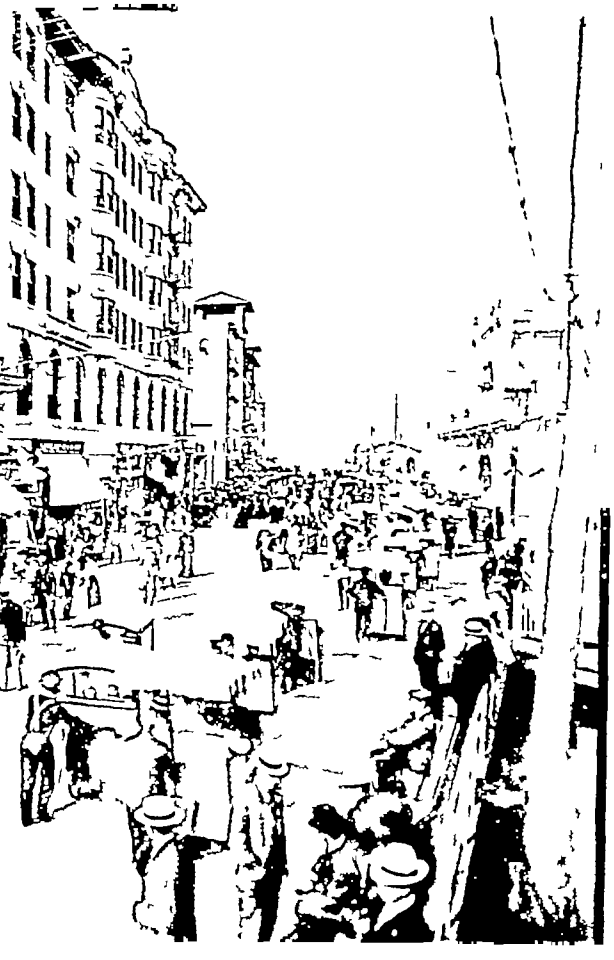


Fig 8 The Boardwalk and its roller chairs

On the Pathology of Exophthalmic Goiter W C MacCallum Baltimore

Symptomatology and Diagnosis of Exophthalmic Goiter Lewellys F Barker Baltimore

Medical Treatment of Exophthalmic Goiter Robert B Preble Chicago

The Surgical Treatment of Exophthalmic Goiter Prof August Kocher Berne Switzerland

The Experimental Production of Epithelial Proliferation Guthrie McConnell St Louis

Observations on the Experimental Transplantation of Tumors in Dogs S P Beebe New York City

The Treatment of Experimental Tumors in Dogs with Bacterial Toxins S P Beebe and Martha Tracy New York City

Observations on the Occasional Failure of the Radial Pulse When the Arms Are Elevated Above the Head Henry Sewall Denver

Further Remarks on the Causative Factor in the Production of the Dermatitis of Ground Itch (Uncinariasis) Claude A Smith Atlanta Ga

The Estimation of the Dried Weight of the Total Bacteria in the Feces and Its Clinical Significance J Dutton Steele Philadelphia

Are the Intestines Able to Propel Their Contents in an Antiperistaltic Direction? Edwin Beer and Carl Beyer New York City

An Explanation of the Seasonal Prevalence of Typhoid M J Rosenau Washington D C

Value of Opsonic Index as a [illegible] Diagnosis William H Park New [illegible]

SECTION ON NERVOUS AND MENTAL DISEASES

CHAIRMAN, MORTON PRINCE, BOSTON, SECRETARY, T H WEISENBURG, PHILADELPHIA

Chairman's Address Morton Prince, Boston
Certain Affections in Children Commonly Classed as Hysteria William N Bullard, Boston
Hysteria, Its Nature and Its Position in Nosology F X Dercum, Philadelphia
Psychasthenia, Its Clinical Aspects and Nosologic Status Among Mental Disorders J W Courtney, Boston
The Motor Phenomena of Chorea Frank R. Fry, St Louis
A Study of 437 Cases of Alcoholic Insanities Alfred Gordon, Philadelphia
The Influence of the Ductless Glands Over Metabolism, with Illustrative Cases Leo M Crafts, Minneapolis
Acute Unilateral Ascending Paralysis Carl D Camp, Philadelphia
Landry's Paralysis, Recovery Partial Relapse, and Complete Recovery John K. Mitchell, Philadelphia
Subacute Combined Cord Degeneration, with Report of 20 Cases Julius Grinker, Chicago
Facial Hemiatrophy Theo Klingmann, Ann Arbor, Mich
Changes in the Peripheral Blood Vessels in Erythromelalgia and Raynaud's Disease B Sachs, New York
The Removal of a Subcortical Cystic Tumor at Second Stage Operation Without Anesthesia H M Thomas and Harvey W Cushing, Baltimore
Report of a Case of Intracranial Tumor Resulting from Traumatism William M Leszynsky, New York
The Differential Diagnosis of Tumors of the Cerebellopontile Angle T H Weisenburg, Philadelphia
Hemicraniosis and Cure of Brain Tumor by Operation William G Spiller, Philadelphia
Brain Tumor with Jacksonian Spasm and Unilateral Laryngeal Paralysis, the Growth Localized and Removed John L. Atlee, Lancaster, and Charles K. Mills, Philadelphia
The Significance of Changes in the Optic Nerves in Certain Affections of the Cerebrospinal System William Campbell Posey, Philadelphia

New Jefferson Medical College buildings Philadelphia to be dedicated June 7 (*vide infra*)

Contribution to the Clinical Study of Arteriosclerosis George L Walton and W E Paul, Boston
The Mental State in Aphasia. C W Burr, Philadelphia
The Present Status of the Clinical Study of Aphasia James Hendrie Lloyd, Philadelphia
An Inquiry into the Methods and Technic of Deep Alcoholic Injection for Neuralgia D'Orsay Hecht, Chicago
Deep Injections of Alcohol for Trifacial Neuralgia, with Report of Cases Hugh T Patrick Chicago
Surgery of the First, Second and Third Cervical Nerves Charles H Frazier Philadelphia
Unusual Forms and Relationships of Migraine James Jackson Putnam, Boston
A New Clinical Type of Ascending Myelitis Due to Vertebral Involvement G M Hammond New York
Spinal Cord Changes Following a Grave Anemia, with Disappearance of All Symptoms J W McConnell, Philadelphia
The Herpetic Inflammation of the Geniculate Ganglion, with Especial Consideration of the Aural Complications J Ramsay Hunt, New York
The Psychology of Dementia Præcox Smith Ely Jelliffe, New York.
Amentia and Dementia Philip Coombs Knapp, Boston
Injuries of the Spinal Cord. Alfred Reginald Allen, Philadelphia.
Syringomyelia and Syringobulbia J H W Rhein, Philadelphia
Sensory Dissociation as a Symptom L Harrison Mettler, Chicago
Nervousness, Its Significance and Treatment John Punton, Kansas City, Mo
Psychic Treatment of Spirit and Drug Neurotics T D Crothers, Hartford, Conn
Headache as a Symptom of Local Disorders Frederic Coggeshall and William E MacCoy, Boston

The Relationship Between Referred Visceral Pain, the Sympathetic System and Various Methods of Therapy S D Ludlum, Philadelphia
Senile Trepidant Abasia E W Taylor, Boston
A Remarkable Case of Jacksonian Epilepsy with Frequent Attacks, Confined for a Year and a Half to the Muscles of the Right Eyeball W P Spratling, Sonyea, N Y
A "Functional" Change in Myeline Sheaths E E Southard F W Gay, Boston

SECTION ON HYGIENE AND SANITARY SCIENCE

Chairman, Prince A Morrow, New York City, Secretary, Elmer E Heg, Seattle, Wash

Chairman's Address Hygiene in Relation to Heredity Prince A Morrow, New York

Symposium on the Hygiene of the Family in Relation to the Productive Energy and Health of the Offspring

The Influence of Gonorrhea as a Factor of Depopulation Joseph Tabor Johnson, Washington, D C
Syphilis as a Cause of Depopulation and Race Deterioration Edward L Keyes, Jr, New York
Gonococcus Infection as a Cause of Blindness—Vulvovaginitis and Arthritis J Clifton Edgar, New York
Artificial Childlessness and Race Suicide J Newton Hunsberger, Skippack, Pa

Symposium on Pure Water Supply and Sewage Purification

Necessity of State Control of Inland Waters H M Bracken, Minneapolis
Stream Pollution and Its Prevention Methods of Obtaining Water Quality and Quantity of Water from Different Sources Variations X. G Goodnough, Boston
Filtration of Water Harry C Clark, Boston
Modern Methods of Sewage Purification and the Relative Applicability George C Whipple, New York
Sewage Purification by Septic Tanks and Chemical Precipitation George T Moore, Washington, D C
The Relation Between Bacteria in Ice and Typhoid Fever, Based on Bacteriologic and Clinical Investigation William H Park
Symposium on Pure Milk Supply, Municipal Regulations Etc, by Charles Harrington, Boston, Thomas Darlington New York, John S Fulton, Baltimore, and G W Coler Rochester N Y

Symposium on Tuberculosis

State's Province in the Study and Prevention of Tuberculosis J B Ransom, Dannemora, N Y
Public Provision for Advanced Cases of Tuberculosis Edward O Otis, Boston
Public Provision for Incipient Tuberculosis Sanatoria and Dispensaries C C Browning, Monrovia Cal
Educational Propaganda for the Prevention of Tuberculosis Livingston Farrand, New York
The Question of Climate in the Treatment of Pulmonary Tuberculosis Paul Paquin, Asheville N C
Modern Hospital Construction Illustrated with Lantern Slides W Gilman Thompson, New York
Hospital Construction Albert J Ochsner, Chicago
Smoke in Relation to Health Abraham Jacobi, New York
What Should be the Attitude of the Profession Toward the Hygiene of School Life? Richard C Newton Montclair N J

SECTION ON PHARMACOLOGY AND THERAPEUTICS

Chairman, H C Wood Jr. Philadelphia, Secretary C S N Hallberg, Chicago

Address of the Chairman H C Wood Jr Philadelphia
Address of Prof J Remington Philadelphia Chairman of Delegation from American Pharmaceutical Association
Report of the Secretary C S N Hallberg Chicago
Report of Committee on the U S Pharmacopeia Oliver T Osborne New Haven, Conn, Chairman
The U S Pharmacopeia Robert Hatcher, New York

Symposium on Gallstones

Medical Treatment of Cholelithiasis George Dock Ann Arbor
The Indications for Surgical Treatment of Cholelithiasis Charles H Frazier Philadelphia
The Treatment of Diabetes Mellitus James Tyson Philadelphia
The Relations of Iodin to the Thyroid Gland Reid Hunt, Washington, D C
Pathophysiology and Therapeutics George F Butler Chicago
A Study of the Effect of Drugs on Coagulation of the Blood William Egbert Robertson, G Morton Illman and Harry A Duncan, Philadelphia
The Effects of Hydrastis and Its Alkaloids on Blood Pressure William Whitridge Williams, Cleveland, Ohio
A Study of the Bromin Compounds with Especial Reference to Strontium Bromid. William J Robinson, New York

Joint Session with the Section on Practice of Medicine
Symposium on Acute Rheumatism

The Prophylaxis and General Management of Acute Rheumatic Fever Solomon Solis Cohen Philadelphia
Specific Treatment of Acute Articular Rheumatism or Treatment with Salicylates N S Davis, Chicago
The Connection of "M D" with Proprietary Remedies H W Wiley, Washington, D C
Materia Medica and Pharmacy in Hospital Practice Martin I Wilbert, Philadelphia
A Plea for a More Thorough Course in Practical Pharmacy and Prescription Dispensing in Our Medical Schools M Clayton Thrush, Philadelphia

SCIENTIFIC EXHIBIT

Frank B Wynn, Indianapolis Director

The Scientific Exhibit consists of two parts

1 Continuous Demonstrations

These are of gross and microscopic specimens, of apparatus models charts photographs, etc, and are conducted by those personally in charge of the respective exhibits The exhibits represent great variety and many are noteworthy in character

2 Amphitheater Demonstrations

These formal demonstrations will occur on Wednesday and Thursday afternoons from 2 o'clock to 5 and will be participated in by W M L Coplin, Charles H Frazier W S Halsted Ludvig Hektoen F Robert Zeit W G MacCallum M P Ravenel Richard C Cabot Lawrence F Flick, J M McCarthy J F Greiwe, W S Hall and others

REGISTRATION

Suggestions and Rules for the Guidance of All Who Will Attend the Session

The Registration Department will be on Young's Pier For admission to the different section meetings exhibits and entertainments, it will be necessary for every member of the Association to register his name and those of his guests and to obtain the official badges provided by the Committee of Arrangements No one will be admitted to any meeting or entertainment without a badge

The Registration Department will be open from 8 30 a m to 5 p m on Monday, Tuesday, Wednesday and Thursday June 3 4 5 and 6 and on Friday June 7, from 9 to 10 a m

Members are requested to observe the following directions

1 Each physician desiring to register will fill out a registration card

2 Each member who has paid his annual dues in full will present his pocket card and this registration card at a window marked "Registration by Receipt"

3 The registration of members who have paid their dues but who have lost their receipts will require a moment or two of extra time, while the records are consulted

4 Members who have not yet paid their dues will present registration card at a window marked "New Members Make Application Here" with a certificate that he is a member in good standing in his state society (Every such prospective member however will save himself delay and annoyance by sending in his application before the session All such letters should be mailed not later than May 25 to the American Medical Association 103 Dearborn Avenue Chicago as the records have to be packed and shipped to Atlantic City early)

6 Each member on registration [illegible] copy of the Official Program a[illegible] ments as may be necessary

America's Greatest Resort.

ATLANTIC CITY—WHERE THE ASSOCIATION HAS BEEN WELL ENTERTAINED TWICE

W BLAIR STEWART, A.M., M D
ATLANTIC CITY, N J

Atlantic City, the playground for the whole world and the greatest seaside health resort, has grown from a few summer cottagers in 1854 to a city of 40,000 permanent citizens Dr Jonathan Pitney of Absecon, N J, a member of our own profession, recognized in the large island of sand five and one half miles to the southeast of the New Jersey coast the unprecedented advantages for giving his patients the open air treatment for disease While not the first to visit Absecon Island, for that is the name of the island on which Atlantic City is located, he was practically the real promoter of the present magnificent city

The first railroad to Atlantic City was built in 1850 and with it gradually came the summer cottager and permanent resident It was only the matter of a few years before the beneficial qualities of the air and the peculiar geographic location of the island five and one half miles at sea and facing the south dawned on the physicians of Philadelphia and other nearby eastern cities The phenomenal growth of the city and the gradual recognition of its merits are now the matters of history

With a permanent population of 40,000 we increase to 300,000 by the height of the season in August, and, what is more gratifying, this large army is properly housed, dined and entertained The capacity of the hotels without crowding ranges from 1,100 down to the small boarding house and cottage With 100 large hotels, over 800 smaller hotels and boarding houses, and about 8,000 cottages and other buildings, one can readily realize the ease with which one's comforts can be met Atlantic City's one aim is the entertainment and comfort of her guests, she can not be classed as a manufacturing or commercial center Our terminus is in the ocean and our only commodities in trade are fresh air, sunshine, good accommodations, wholesome food, pure water and the pleasure and health of our guests

The ocean and beach front with its six miles of Boardwalk are the leading attractions What more can one wish? The continuous ebbing and flowing of the tides, the never ceasing rolling and breaking of the waves, the ever present line of whitecapped billows, the gentle song of the sea, sometimes fine and mild and at other times rough and boisterous, all tend to make the initial visit of the stranger one grand dream Lost to the world, lost to self, all care and trouble forgotten, silent sentimentalisms pleasurable emotions, poetic thoughts, hours of admiration—the typical reveries of the tenderfoot's first view of the ocean Is it any wonder that trouble is forgotten health benefited and cares neglected?

THE BOARDWALK

Atlantic City's Boardwalk is unique, and nowhere in the world can you find its duplication A steel structure with a Georgia pine deck, elevated from five to fifteen feet above the beach, six miles long and twenty to sixty feet in width On one side is an unobstructed view of the ocean and beach while the other is lined by hotels, places of amusement and bazaars It is on this structure that you will find a regular kaleidoscopic moving mass of humanity representing every state in the Union and every civilized nation of the earth "Babel let loose," as one expressed it In fact "Meet me on the Boardwalk at Atlantic City" has become one of the world's by words

Five piers, each over 1 000 feet in length extend from the Boardwalk into the sea and on them one can find amusement, recreation, fishing or a peaceful rest at all times of the year Open in summer and heated in winter the music halls provide the very best high class music. Sitting on the extreme end of the piers in an easy chair watching the rolling waves, is the full equivalent of a real sea voyage but lacking the roll and toss of the vessel and the too oft experienced seasickness

At night one can imagine himself in fairyland under the myriad thousands of small electric lights overhead and all around, for the Boardwalk and many buildings are one blaze of light. This illumination alone more than repays one for the trip to this city

RECREATION

Yachting and fishing are two forms of entertainment and recreation always available Here one can have a sail on the bays and thoroughfares on smooth water or directly on the ocean, where the roll and toss of the waves are fully experienced Atlantic City is not a port of entry and does not afford the presence of an idle, undesirable, illiterate class of rough seafaring men The whole city and Boardwalk are so carefully policed at all times of the day and night that ladies can come and go without escort or fear of molestation

The Country Club, located at Northfield, seven miles away, affords every opportunity for golf and other outdoor sports at all seasons and can be reached by trolley at any hour So varied are the many sources of amusement, exercise and recreation that "dull care" never finds opportunity Stormy and rainy days? Yes, we have a few, but a trip to Atlantic City is not complete without an opportunity to see the "demons of the deep toss the spray and waves into a fury not soon to be forgotten" Not dangerous when viewed from a hotel window or the Boardwalk, but often disastrous to the poor mariner at sea in a frail craft

The sewage plant of Atlantic City works on the gravity system The sixty miles of sewer pipes flow into a common station, whence the sewage is pumped through large pipes into Beach Thoroughfare, several miles back of the city, where billions of gallons of sea water ebb and flow twice daily So complete is the dilution of the sewage by the time it reaches the ocean in front of the city that it can not be detected by the most delicate tests Atlantic City is the only seashore resort on the Atlantic Coast that does not discharge its sewage into the ocean directly in front of the city The plant's average pumping capacity for 1906 exceeded 8,000,000 gallons daily

WATER SUPPLY

No purer water supply is given to any city than the mixed artesian and cedar water of Atlantic City There are fifteen active artesian wells that supply 4,000,000 gallons of the purest, clear, sparkling water obtainable at any place. With new appliances being installed, it will be possible to increase the output of these wells sufficiently to supply the entire demand of Atlantic City for water from October to June The present daily consumption during the months of October to June is 6,500,000 gallons In August, 1906, it required 10,200,000 gallons daily to supply the city The additional water comes from a protected cedar grown watershed entirely free from possible contamination The last monthly examination of the water supply made by Dr Henry Leffman and Dr David H Bergey of Philadelphia showed a strictly safe and potable water, nearly chemically pure, with no suspicious bacteria of any kind Many of the largest hotels supply their own water of purest quality from artesian wells driven to a stratum 800 to 900 feet deep There are no fresh water streams or ponds within six miles of Atlantic City, hence a scarcity of mosquitoes and a positive absence of malarial influences

CLIMATE

The climate of Atlantic City is so pleasant, balmy and sunshiny on the average that thousands no longer seek health in the South, but spend their time here This is more and more recognized each year by physicians, who send their convalescents by the thousands at all times of year The Weather Bureau of the United States Department of Agriculture, located in Atlantic City, reports, during thirty three years, an average of 61 per cent of sunshine, 123 clear days, 137 partly cloudy days, and 105 cloudy days The normal temperature in January is 32 February, 33, March, 30, April, 48, May, 58 June 67, July, 72 August, 73, September, 68 October 57 November, 46, December, 36, annual average, 52 These temperature ranges apply to the weather bureau station but not to the Boardwalk Here the average winter

temperature is from two to ten degrees higher, while the summer temperature is two to ten degrees cooler This is due to the protected southerly exposure, the warmer water radiations in winter and the cooler in summer Invalids take advantage of these facts and are able to spend at least 65 to 70 per cent of their time on the Boardwalk From October to March the prevailing wind is northwest, from April to September it is southwest

The rolling chair habit has grown to such phenomenal proportions that not only do invalids use these easy vehicles, but the average visitor can make use of them as he would of the busses and carriages This affords every opportunity to enjoy the climatic influences and the beauties of the sea The classes of invalids most benefited are convalescents, anemics, patients who have been operated on, neurasthenics, debilitated and diseased children, overfatigued business men and women, those with incipient tuberculosis, malaria, heart affections and catarrhal conditions (for a limited time), about 50 per cent of rheumatic and asthmatic patients, and all who need fresh air, sunshine, exercise, relaxation and rest Every facility is offered by the City Hospital, sanatoria and private cottages for any form of treatment within the range of modern medicine and surgery Surf bathing, hot and cold sea water bathing and treatments are available It is unnecessary to advise the profession at large of the merits and demerits of climatic influences, but it is well to caution against hoping for things impossible by sending patients in the last stages of disease away from comfortable homes to die in a hotel or a boarding house at this or any other resort

The general health of Atlantic City's population is remarkably good, largely on account of climate, the wholesome food and water supply and an efficient health law that is strictly enforced Typhoid fever is practically unknown except for a few cases that are imported each year The public schools have a system of medical inspection conducted by eleven regular physicians By this means and by the action of the board of health contagious diseases are limited to a very few cases

THE CITY ITSELF

Just a word or two about the city in general There are ten school buildings graded to the highest standard, preparing scholars for any college, thirty churches representing all denominations, a most efficient paid fire department of fourteen separate companies, an efficient corps of municipal life guards and medical men on the beach during surf bathing seasons, eight banking institutions and trust companies of the highest rank—in fact, everything that goes to make an up to date city There is no city in the world better able to care for conventions of all sizes and to give almost unlimited accommodation of the very best kind without crowding and overcharging An influx of 10,000 to 20,000 people is no longer a novelty, and they are so well cared for and with such little effort that their presence is scarcely noticed except on the Boardwalk

Our hotels range from the palatial beach front structures of steel and concrete to the more unobtrusive little boarding houses on the side streets Money has not been spared in providing for the comforts of their guests One can find every home comfort at command winter and summer The rates charged by these hotels are within the reach of all and are proportionately low when compared with other cities Many of them supply hot and cold fresh and sea water baths with each suite of rooms Special diet kitchens for the preparation of food for invalids and the sick are noticeable features of the best hotels For the benefit of those who expect to attend the coming convention of the American Medical Association in Atlantic City a list of approved hotels is appended In engaging rooms it is best to communicate directly with the hotel desired for reservations There will be no crowding of guests because of lack of room, as ample provision has been made for every one who comes Below is given a list of the leading Atlantic City hotels with the location capacity and rates a list of headquarters and a list of section meeting places

The general headquarters for registration, information and exhibits will be located on Young's Pier Tennessee Avenue and the Boardwalk, where every one is requested to register immediately on arrival in Atlantic City The Bureau of Information on this pier will give all data respecting hotels, meeting places and other points desired

EXCELLENT RAILROAD SERVICE.

Probably no other city of its size has a better railroad service than Atlantic City The Pennsylvania, the Reading, the Jersey Central and the electric lines all maintain the finest equipment of their systems on their Atlantic City branches The tracks are all stone ballasted and protected by the automatic signal system The fastest express trains run at very frequent intervals It is a noticeable fact that out of the thirteen fastest trains maintained in the world nine are scheduled on the Atlantic City systems Speed safety comfort and luxury are the watchwords of the railroads Special cars and trains will be made up and run through to Atlantic City without change for the coming session in June The passenger associations have granted an excursion rate of one first-class fare plus $1 The present return limit is June 10 The Transportation Committee is endeavoring to have a further extension and if it is obtained due notice will be given in THE JOURNAL Special attention is also called to the Souvenir Booklet to be mailed by the regular medical profession of Atlantic City about May 1, to every member of the American Medical Association This with the circular from the local Committee of Arrangements will supply additional data and take the place of the usual Souvenir Booklet given out at the time of the session

The local Committee of Arrangements has made every preparation for an exceptionally large meeting and extends a hearty welcome to every member of the American Medical Association who can possibly attend the Atlantic City session Entertainment has been provided for the visiting ladies and guests and members of the Association These functions will be announced at the time of registration Additional information will be gladly given by the members of the local committee the personnel of which follows

COMMITTEE ON ARRANGEMENTS

W Blair Stewart Chairman North Carolina and Pacific Avenues

Edward Cuion Secretary J Addison Joy Treasurer

COMMITTEE ON FINANCE

Eugene L Reed Chairman

W Edgar Darnall J Addison Joy, Philip Marvel W M Pollard, Walter Reynolds

COMMITTEE ON HALLS AND MEETING PLACES

Walt Ponder Conaway, Chairman

F S Sharpe M L Somers, I F Leonard

COMMITTEE ON COMMERCIAL EXHIBIT

Edward Cuion, Chairman

H Stokes Doriss Thomas S Cithens

(All correspondence concerning the reservation of space for exhibits should be addressed to the American Medical Association 103 Dearborn Avenue, Chicago)

COMMITTEE ON ENTERTAINMENT

Emery Marvel Chairman

Andrew L Atherton Clara K Bartlett, David Berner, Walt P Conaway Elisha C Chew W Price Davis I Webster Fox Charles H Frazier, F L B Godfrey Edward Cuion Edwin H Harvey, W Atlee Hickman, Milton S Ireland William J Jonah J Addison Joy, Bernard R Lee, Alexander Marc , Joseph C Marshall Philip Marvel, Paul M Murray, Victor M Metzler, James C T McIlvay, Ely F Parker, Rose V Patterson William M Pollard, Edward J Porteous Eugene L Reed Thomas K. Reed George Scott James W Snowball Jesse B Thompson P Woolbert.

CITIZEN'S COMMITTEE ON ENTERTAINMENT

Col Savery Bradley, Harry Bacharach, Elwood Bartlett, Albert T Bell, Walter Buzby, William S Cochran, Harry B Cook, Harry H Deakyne, W B Dill, Hon Allen B Endicott, Charles Evans, Walter E Edge, Brinkle Gummy, Newlin Haines, Louis Kuhnle, J Haines Lippincott, Harry Leeds, Daniel Myers, Jacob Myers, Col Thomas Potter, Frederick Robbins, Hon Franklin P Stoy, Ernest Shackelford, Charles D White, John J White, Harry Wallace

COMMITTEE ON PROGRAM, PRINTING, ETC

George Scott, Chairman

Clara K Bartlett, Clarence Garrabrant, Emery Marvel

COMMITTEE ON HOTELS

William E Jonah, Chairman

J C T McVay, W Price Davis

COMMITTEE ON BUREAU OF INFORMATION

Milton S Ireland, Chairman

A E Ewens, Nevin B Werst W F Ridgway

COMMITTEE ON BADGES

Clara K. Bartlett, Chairman

Mary E. Townsend, E J Porteous, Eugene L. Reed, W A Hickman, J F DeSilver, A L Atherton

COMMITTEE ON ALUMNI AND SECTION ENTERTAINMENTS

James W Snowball, Chairman

A B Shimer, J C Marshall, David Berner, Joseph F DeSilver, Victor W Metzler, Thomas G Dunlap

COMMITTEE ON SCIENTIFIC EXHIBIT

Edward J Porteous, Chairman

Samuel Barbash, W C Wescott

COMMITTEE ON REGISTRATION

Edwin H Harvey, Chairman

E C Chew A E Ewens, J C T McVay, E Ely Parker

COMMITTEE ON LADIES' ENTERTAINMENT

Mrs A D Cuskaden, Chairman

Mrs W Blair Stewart, Mrs W E Darnall, Mrs M L Somers, Mrs James North, Mrs T G Dunlap, Mrs W H. Walling, Mrs W M Pollard, Mrs George Scott, Mrs J A Joy, Mrs J C T McVay, Mrs Edward Guion, Mrs W A. Hickman Mrs Philip Marvel, Mrs E. J Porteous, Mrs T K. Reed, Mrs Emery Marvel, Mrs H Stokes Doriss, Mrs M L Ireland, Mrs C Garrabrant, Mrs A L Atherton, Mrs E H Harvey, Mrs W Price Davis, Mrs Joseph DeSilver, Dr Clara K. Bartlett, Dr Mary E. Townsend, Mrs Reiley, Mrs. Edwin Sharpe, Mrs C E Filbert Mrs I E Leonard

MEETING PLACES

Convenient and Commodious Places for the Various Sections and General Meeting

The following is a list of the various meeting places arranged by the Atlantic City Committee for the various General Meetings and for the several sections

OPENING SESSION (Tuesday at 10 30 a m) Auditorium Young's New Pier
EVENING SESSIONS (Orations) Casino Hall Steel Pier
HOUSE OF DELEGATES Tower Observation Hall Hotel Traymore
TRUSTEES ROOM Marlborough House
PRACTICE OF MEDICINE Casino Hall Steel Pier
SURGERY AND ANATOMY Music Hall Steel Pier
OBSTETRICS AND DISEASES OF WOMEN Dance Hall Steel Pier
DISEASES OF CHILDREN Ocean Parlor Hotel Traymore
LARYNGOLOGY AND OTOLOGY Baptist Church Pacific and Pennsylvania Aves
OPHTHALMOLOGY First Presbyterian Church Pacific and Pennsylvania Aves
NERVOUS AND MENTAL DISEASES Brighton Casino
HYGIENE AND SANITARY SCIENCE Sun Parlor Steel Pier
CUTANEOUS MEDICINE AND SURGERY Park Avenue Hall Hotel Marlborough
PATHOLOGY AND PHYSIOLOGY Dennis Sun Parlor, Dennis Hotel and Scientific Exhibit Hall for special meetings on Young's Pier
PHARMACOLOGY AND THERAPEUTICS Ocean Hall, Marlborough
STOMATOLOGY Casino Hall, Committee Room No 1 Steel Pier
REGISTRATION AND BRANCHES BUREAU OF INFORMATION Main Entrance Young's Old Pier
POSTOFFICE TELEGRAPH TELEPHONE AND BUREAU OF INFORMATION Marine Hall, Young's Old Pier
COMMERCIAL AND SCIENTIFIC EXHIBITS Marine Hall Young's Old Pier
PRESIDENT'S RECEPTION Music Hall Steel Pier
LADIES' AFTERNOON TEA Hotel Marlborough Blenheim

ATLANTIC CITY HOTELS

Ample Accommodations for All will be Found Easily in This City of Hotels

HEADQUARTERS

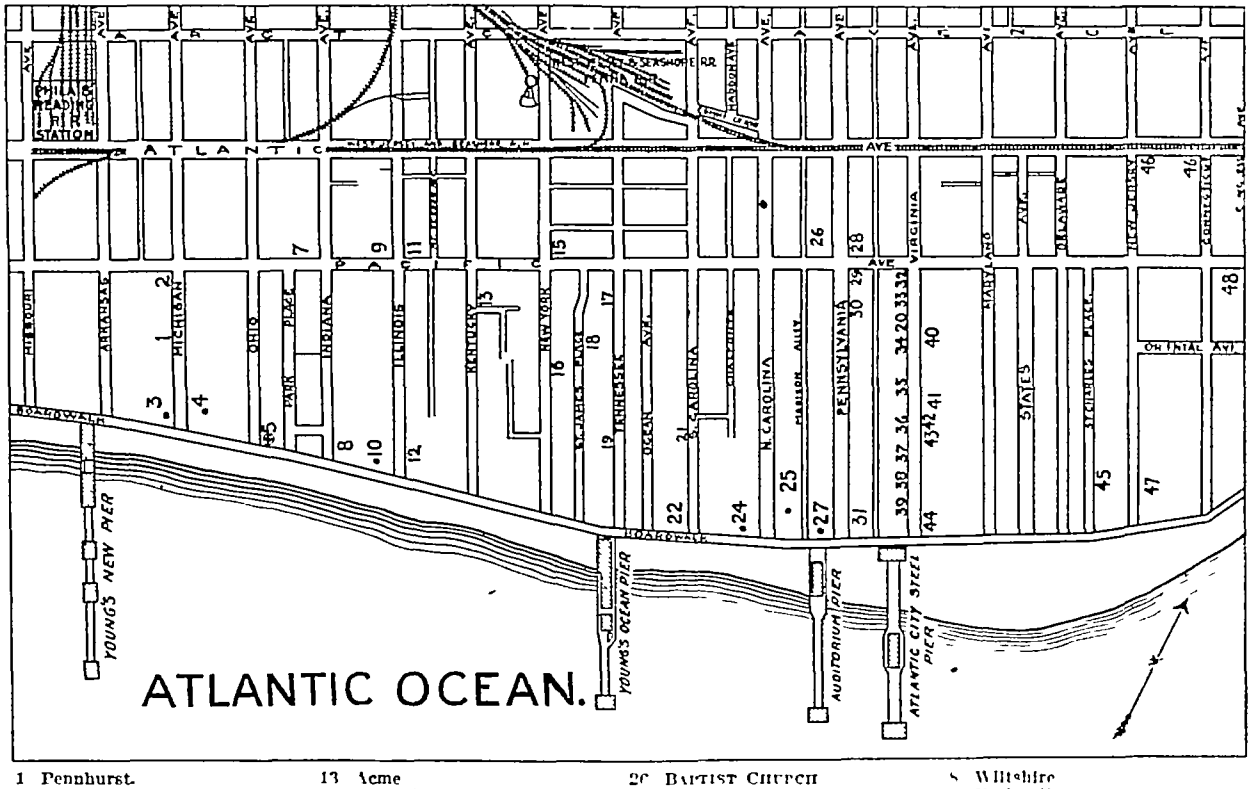
OFFICERS AND GENERAL HEADQUARTERS	Marlborough Blenheim
PRACTICE OF MEDICINE	Hotel Dennis
SURGERY AND ANATOMY	Hotel Chalfonte
OBSTETRICS AND DISEASES OF WOMEN	Haddon Hall
DISEASES OF CHILDREN	Hotel Traymore
OPHTHALMOLOGY	Hotel Seaside
LARYNGOLOGY AND OTOLOGY	Hotel Strand
NERVOUS AND MENTAL DISEASES	Hotel Brighton
HYGIENE AND SANITARY SCIENCE	Hotel St. Charles
CUTANEOUS MEDICINE AND SURGERY	Marlborough Blenheim
PATHOLOGY AND PHYSIOLOGY	Hotel Shelburne
PHARMACOLOGY AND THERAPEUTICS	Marlborough Blenheim
STOMATOLOGY	Hotel Traymore

The following alphabetical list of the leading hotels of Atlantic City gives the address of each, the capacity, the plan whether European, American or both—and the rates per day for one person. The numbers in parentheses following the names refer to the location on the map The hotels given in capital letters are those which have been selected as headquarters for the various sections, etc.

ABBEY (11) Pacific and Mt. Vernon Aves., 350 American and European $1 50 to $2 50
ACME (13) 123 So Kentucky Ave. 40 American $1 50 to $2 50
ALBEMARLE (32) Virginia Ave., near Beach 350 American, $2 to $5
ALBION Atlantic and Massachusetts Aves 150 European $1 to $2
ALGONQUIN South Carolina Ave near Beach 100 American $1 50 to $3
ARCHDALE St. James Place near Beach 150 American $2 to $2 50
ARDMORE (37) Virginia Ave near Beach 125 American $2 up
ATGLEN 20 So Michigan Ave 150 American $1 50 to $2
BATES' INLET HOTEL Inlet and Boardwalk 35 European $1 to $1 50
BEAUMONT (18) 130 So Tennessee Ave 200, American $1 50 to $2 50
BERKSHIRE INN (43) Virginia Ave, near Beach, 300 American $2 to $5
BEYER'S Maryland and Arctic Aves. 20 American and European Amer $1 50 to $2
BINGHAM (15) Pacific and New York Aves 100 American and European $1 50 to $2 50
BOTHWELL (59), Virginia Ave near Beach 250 American $2 50 to $5
BRIGHTON (8) headquarters Nervous and Mental Diseases Indiana Ave and Boardwalk 300 American rates on application
CEDARCROFT (22) South Carolina Ave near Beach 250 American $2 up
CHALFONTE (24) headquarters Surgery and Anatomy North Carolina Ave and Boardwalk 600 American $4 up
CHELSEA Morris and Brighton Aves and Boardwalk 500 American $4 to $10
CHELTENHAM Virginia Ave rates on application
CLABBY Tennessee and Atlantic Aves 50 men only $1 to $3
CLARENDON (33) Virginia Ave near Beach 300 American $2 $2 50 and $3
COLWYN 21 So Michigan Ave 150 American $1 50 up
CONTINENTAL, Tennessee Ave between Atlantic and Pacific Aves 500 American and European $1 50 to $2 50
DAVENPORT, South Carolina Ave, near Beach 200 American $1 50 to $2.50
DENNIS (4) headquarters Practice of Medicine Michigan Ave and Boardwalk 600 American $3 50 to $6
EARL-MAR HALL Vermont Ave. and Beach 300 American $2 to $5
EASTBOURNE (7) Pacific Ave., opposite Park Place 50 American $2 50 to $4
FENWITT HOUSE 127 St James Place 100 American $2 to $2 50
EDISON (2) Michigan and Pacific Aves 250 American and European Amer $1 50 up Europ $1 up
ELBERON Pacific and Tennessee Aves 300 American $1 50 to $2 50
ELWOOD St James Place near Beach 150 American $1 50 to $3 50
FREDONIA (19) Tennessee Ave near Beach 250 American and European Amer $2 to $2 50 Europ $1 to $2
GALEN HALL (48) Connecticut and Pacific Aves 350 American rates on application

Garden (9) Illinois and Pacific Aves 300 American and European Amer $3 to $6 Europ $2 up
Garman Atlantic and New Jersey Aves 50 American $2
Gladstone Brighton Ave and Beach 150 American $3 to $6
Grand Atlantic (41), Virginia Ave near Beach 500 American $2 50
Greater Pittsburgh 142 So Tennessee Ave 100 American $1 50 up
Haddon Hall (25) headquarters Obstetrics and Diseases of Women No th Carolina Ave and Boardwalk 450 American rates on application
Hygeia New York and Pacific Aves 200 American $2 up
Iroquois (21) South Carolina Ave near Beach 400 American and European Amer., $2.50 to $4
Islesworth (44) Virginia Ave and Boardwalk American $3 to $3 50
Kentucky Kentucky Ave near Beach 200 American and European $2 to $2.50
Larsen 2117 Pacific Ave. 165 American $1 up
Loraine St. Charles Place near Beach 200 American $3 to $5
Malatesta Atlantic and North Carolina Aves 200 American and European Amer $2 to $2 50
Marlborough Blenheim (5) general headquarters also Cutaneous and Pharmacology Ohio Ave Park Place and Boardwalk 1 100 American and European Amer $4 to $10 Europ $2 to $8
Mason's 8 So Maryland Ave. 20 European $1 up
Miller Cottage and Annex, 9 No Georgia Ave 250 American $1 to $1 25
Monticello Kentucky Ave near Beach 300 American $2 to $3 50

Reade 613 Pacific Ave above New Jersey Ave 150 American and European Amer $2 to $2.50 Europ $1 to $1 50
Roanoke 23 So New York Ave 150 American $2 up
Rudolf (47) New Jersey Ave. and Boardwalk American $2.50 to $5
St Charles (45) headquarters Hygiene and Sanitary Science St. Charles Place and Boardwalk 300 American $3 to $7
St Clare Pennsylvania Ave. near Beach 135 American $2 to $3
St Elmo 120 So Tennessee Ave 100 American $1 25 to $2
St James St James Place near Beach 65 American $2 to $3
Scarborough Beach front at Maryland Ave American $2 50
Seaside House (31) headquarters Ophthalmology Pennsylvania Ave and Beach 275 American $3 50 to $10
Shelburne (3) headquarters Pathology and Physiology Michigan Ave and Boardwalk 300 European $1 50 up
Sothern (36) Virginia Ave near Beach 200 American $2 to $3
Strand (27) headquarters Laryngology and Otology Pennsylvania Ave and Boardwalk 300 American $3 50 to $6
Strath Haven Kentucky Ave near Beach 125 American $1 50 to $2 50
Tracy (17) 112 So Tennessee Ave 75 American and European Amer $1 50 to $3 Europ $1 up
Traymore (10) headquarters Pediatrics and Stomatology Illinois Ave. and Boardwalk 600 American $4 up
Vermont Vermont Ave near Beach 150 American $1 to $3
Victoria (20) 117 So Virginia Ave 0 American $1 50 to $2
Warwick South Carolina Ave and Beach 100 American $2.50 to $3 50
Wenz Hotel and Restaurant Atlantic and New York Aves 60 American and European Amer $1 50 up Europ $1 up



1 Pennhurst
2 Edison
3 Shelbourne
4 Dennis
5 Marlborough Blenheim
6 High School
7 Eastbourne
8 Brighton
9 Garden
10 Traymore
11 Abbey
12 Windsor
13 Acme
14 Postoffice
15 Bingham.
16 New Holland
17 Tracy
18 Beaumont
19 Fredonia
20 Victoria
21 Iroquois
22 Cedarcroft
24 Chalfonte
25 Haddon Hall
26 Baptist Church
27 Strand
28 Presbyterian Church
29 Postoffice
30 New Chatham
31 Seaside House
32 Albemarle
33 Clarendon
34 New Belmont
35 Raymond
36 Sothern
37 Ardmore
38 Wiltshire
39 Bothwell
40 Cheltenham
41 Grand Atlantic
42 Ponce de Leon
43 Berkshire Inn
44 Islesworth
45 St Charles
46 Phillips
47 Rudolf
48 New Galen Hall

New Belmont (34) Virginia Ave near Beach 300 American and European Amer $2.50 up Europ $1 up
New Chatham (30) 111 So Pennsylvania Ave 65 American $2.50 to $4
New Holland (16) New York Ave $1 50 up
New Roman St Charles Place near Beach 150 American $3
Old Homestead 27 So Kentucky Ave 125 American $1 25 to $2
Pennhurst (1) Michigan Ave near Beach 160 American $2 50 to $3 50
Penneyn Cottage 108 So Ohio Ave 50 American $1.25 to $2
Phillips (40) 14 So Connecticut Ave 100 American $2 to $2 50
Ponce de Leon Virginia Ave near Beach American $2 up
Raleigh St Charles Place near Beach 400 American $2 50 to $4
Raymond (35) Virigina Ave near Beach 150 American $2 to $3

Wiltshire (38) Virginia Ave near Beach 200 American and European Amer $2 50 to $5 Europ $1 50 to $4
Windsor (12) Illinois Ave and Boardwalk American $3 to $5

GENERAL MEETINGS

The Formal Opening Tuesday Morning—The Orations at the Evening Meeting

The opening of the fifty eighth annual session will be the General Meeting held Tuesday morning at 10 30 o'clock in the Auditorium on Young's New Pier. A [illegible] be made by Dr Alexander Marey president

sey State Medical Society, Hon Edward C Stokes, governor of New Jersey, and Hon F P Stoey, mayor of Atlantic City The President elect, Dr Joseph D Bryant, New York City, will be installed and will make an address

The evening General Meetings will be held at 7 30 p m in the Casino Hall on the Steel Pier

On Tuesday evening the Oration on Medicine will be delivered by Dr James B Herrick, Chicago, and the Oration on Surgery by Dr William H Wathen, Louisville, Ky

On Wednesday evening Dr Samuel G Dixon, Philadelphia, will deliver the Oration on State Medicine

HOUSE OF DELEGATES

Membership of the Legislative Body of the American Medical Association, 1907

As a number of the state associations have not yet held their meetings for 1907, it is impossible to give, at this time, a complete list of the members of the House of Delegates for the Atlantic City session The following is a list of the hold over delegates and of the newly elected members who have been reported up to the time of going to press

ARKANSAS
E K Williams Arkadelphia.

CALIFORNIA
Oliver D Hamlin Oakland
H Bert Ellis Los Angeles
Phillip M Jones San Francisco

COLORADO
Hubert Work Pueblo
F N Hall Denver

CONNECTICUT
George R Shepherd, Hartford

DELAWARE
Peter W Tomlinson Wilmington

DISTRICT OF COLUMBIA
George N Acker Washington

FLORIDA
Joseph N Porter Key West

GEORGIA.
T D Coleman Augusta
T P Waring Savannah

IDAHO
R L Nourse Boise

ILLINOIS
George W Webster Chicago
J L Wiggins, East St Louis
O B Will, Peoria.
Charles L. Mix Chicago

IOWA.
E E Dorr Des Moines
Wm Jepson Sioux City

KANSAS
C E Bowers Wichita

KENTUCKY
J Garland Sherrill Louisville
J N McCormack Bowling Green
W W Richmond Clinton

MAINE
E M Fuller Bath

MARYLAND
C L. Tanevhill Baltimore

MASSACHUSETTS
Walter P Bowers Clinton.
Frank G Wheatley North Abington
Edward H Bradford Boston
C H Cook, Natick.
R C Cabot Boston

MICHIGAN
A I Lawbaugh Calumet
Leartus Connor Detroit.

MINNESOTA
John T Rogers St Paul
A L Spalding Luverne

MISSISSIPPI
John Darrington Yazoo City
W W Crawford Hattiesburg

MONTANA.
Donald Campbell Butte

NEBRASKA.
R C Moore Omaha.

NEVADA
J F Pickard, Virginia City

NEW HAMPSHIRE
John M Gile Hanover

NEW JERSEY
Chas L. Kipp Newark

NEW YORK
Wisner R Townsend New York City
Abraham Jacobi New York City
J W Grosvenor Buffalo
D C Morlarta Saratoga
Albert Vander Veer Albany
W S Ely Rochester
H L. Elsner Syracuse
A T Bristow Brooklyn
R Park Buffalo
H D Wey Elmira

NORTH CAROLINA
W J Lumsden Elizabeth City
J W Long Greensboro
Martin L Stevens Asheville

PENNSYLVANIA.
Fremont W Frankhauser Reading
Adolph Koenig Pittsburg
William T Williams Mt Carmel
Samuel Wolfe Philadelphia
Alexander R Craig Philadelphia
George W Guthrie Wilkes Barre
Edward B Heckel Pittsburg
Walter Lathrop Hazleton

OHIO
Frank D Bain Kenton
A P Walker Canton

OREGON
H W Cole Portland

PHILIPPINE ISLANDS
J R McDill Manila

RHODE ISLAND
John Champlin Westerly

TENNESSEE
T J Happel Trenton

TEXAS
J T Wilson Sherman
C E Cantrell Greenville
A C Scott Temple
S T Turner El Paso
Frank Paschal San Antonio

UTAH
Philo F Jones Salt Lake City

VERMONT
J Henry Jackson Barre

WASHINGTON
N Fred Essig Spokane.

VIRGINIA
Wm E Anderson Farmville

WISCONSIN
W H Washburn Milwaukee
W T Sarles Sparta
B M. Caples, Waukesha

SECTIONS.

HYGIENE AND SANITARY SCIENCE
Denslow Lewis Chicago

SURGERY AND ANATOMY
I B Lund Boston

OPHTHALMOLOGY
Samuel D Risley Philadelphia

STOMATOLOGY
C V L. Brown Milwaukee

OBSTETRICS AND DISEASES OF WOMEN
W B Dorsett St Louis

NERVOUS AND MENTAL DISEASES
D Orsay Hecht Chicago

TRANSPORTATION

One Fare for the Round Trip—Special Trains and Special Parties

The New England Passenger Association, the Trunk Line Association and the Central Passenger Association have granted a rate for the round trip of one first class limited fare plus $1 Tickets will be sold and good going May 31 to June 4, inclusive, returning, leaving Atlantic City June 4 to 10, inclusive By deposit of the ticket by the original purchaser, in person, with the special agent at Atlantic City not later than June 10, and payment of fee of $1 at time of deposit, an extension of the return limit may be obtained to leave Atlantic City not later than June 18

The Transcontinental Passenger Association granted a one first class 30 day fare for the round trip, tickets to be on sale May 20 and 21 Final arrangements of this association with the eastern passenger associations have not yet been announced, but tickets from the Pacific Coast and Mexico will be good returning within 90 days from date of sale The Transcontinental Passenger Association covers the western part of the United States, including all of the Pacific Coast

An attempt was made to extend the time of return which is effective on tickets from points east of the Pacific Coast and Mexico, but the several lines wished to keep the limit at June 18

Rates to the Jamestown Exposition are mentioned below

American Medical Special

The Committee on Transportation of the Chicago Medical Society is perfecting arrangements for a special train from Chicago to Atlantic City This train will be known as the American Medical Special, and will run over the Pennsylvania System leaving Chicago on Sunday, June 2, at 3 p m, and reaching Atlantic City early on Monday morning The train will be a special electric lighted, solid vestibule train, consisting of two diners, a Pullman observation car, composite smoking car, baggage car and a sufficient number of Pullman sleepers to accommodate all who desire berths The train will be run from Chicago to Atlantic City without change The fare will be $21 50 for the round trip Sleeping car berth will be $5 Rules concerning tickets will be as above stated Stopover privileges in Philadelphia and Washington may be had within the limits of the ticket Those desiring to return via Washington must secure tickets reading that way All reservations for accommodations on this train will be made in Chicago at the office of the city ticket agent of the Pennsylvania System, No 248 Clark Street Berths may be reserved by letter or telegraph It is anticipated that a large number of physicians from Chicago and points West will engage passage on this train

An Ohio Special

The physicians of Akron Ohio, have issued an invitation, through the Summit County Medical Society to all members of the profession of the Sixth Councilor District to attend the Atlantic City Session in a body Special Pullmans will start from Akron and Canton on Monday evening, June 3, and will be transferred at North Philadelphia directly to the Atlantic City train Hotel headquarters have been selected in Atlantic City and special features are being arranged for the comfort of members of the party A circular giving the details of the trip has been sent to all members of the profession in the district

Baltimore and Ohio Route

The Baltimore & Ohio Railroad has made a special rate of $21 25 round trip from Chicago to Atlantic City, with stopover privileges at Washington, Baltimore and Philadelphia The fare for a side trip from Philadelphia to New York and return is $4 The fare from Baltimore or Washington to Norfolk, Va, and return is $3 on the day boat and $5 on the night boat Tickets are good as outlined above Sleeping car accommodations as well as any further information can be obtained from W W Pickering, District Passenger Agent, Baltimore & Ohio Railroad, 244 Clark Street, Chicago

Missouri Valley Special.

Arrangements are being made for a special train from St Louis to Atlantic City, to be known as the Missouri Valley Special This train will be composed of Pullman sleepers, diners and observation cars, and will leave St Louis on Saturday, June 1, at noon, running over the Big Four and Chesapeake & Ohio Railways, via Indianapolis Cincinnati and the picturesque resort region of the Virginias The train will stop over Sunday at Hot Springs, Va It will arrive at Atlantic City on Monday morning The return trip will be via New York City, Jamestown Exposition, Richmond and White Sulphur Springs A cordial invitation is extended to all physicians of the territory covered by this route to join this party with their families and friends whether members of the organization or not Secretaries of district and county societies in the west and northwest are invited to make up parties Special cars will leave Omaha (via Wabash Railroad), Kansas City and St Joe (via Missouri Pacific Railroad) on the evening of Friday, May 31, arriving in St Louis early in the morning of June 1, and allowing four hours in that city before the leaving time of the special All requests for further information or for hotel and sleeping car reservations should be addressed to Dr Charles Wood Fassett, St Joseph, Mo

Special from Detroit.

A special train will leave Detroit over the Michigan Central on Monday evening, June 3, provided one hundred reservations are made, otherwise special Pullmans will be attached to the regular afternoon train Further announcements regarding arrangements for Michigan physicians will be announced later

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STOPOVERS AND SIDE TRIPS

Clinics in Philadelphia—The Jamestown Exposition

Railroad tickets which read via Philadelphia, Washington or Baltimore, allow stopover at these places provided the ticket is deposited with the ticket agent at such place immediately on arrival The ticket must be called for and the journey taken up again before date of expiration

The Jamestown Exposition

Many will take advantage of the above privilege to make a side trip to the Jamestown Exposition This exposition will, in a way, be unique in the history of such celebrations It will have as a part of its attractions the most remarkable marine review ever seen in American waters In keeping with the event which it commemorates there will be shown side by side the arts and industries as practiced in 1607 and 1907

It is to be remembered that favorable railroad rates are in effect this summer direct to the exposition Some may prefer to buy their tickets to Jamestown with stopover at Washington Baltimore or Philadelphia and make a side trip to Atlantic City at the time of the session

The New Jefferson Medical College Hospital

In connection with the meeting of the American Medical Association in Atlantic City, June 4 to 7, 1907 the medical profession in Philadelphia purposes providing a number of entertainments for the members of the Association who will necessarily have to pass through that city on their way to the seashore Among these entertainments will be those connected with the opening of the new Jefferson Medical College Hospital which has just been completed at a cost of $1 500 000 (See illustration on page 1516)

On Saturday, June 1 the alumni dinner of the Jefferson College will be held, and to this all Jefferson graduates are cordially invited On Monday, June 3, the commencement exercises of the Jefferson College will take place at the American Academy of Music, and in addition to the degrees conferred on members of the graduating class, a number of honorary degrees will be conferred on distinguished physicians To these exercises which are held at noon, all members of the American Medical Association are also cordially invited

On Friday, June 7 at 3 o clock, the exercises in connection with the opening of the new hospital will take place, this date being chosen in order that members of the Association may have an opportunity on their way back from Atlantic City to inspect the new building At these exercises addresses will be delivered by the Honorable William Potter, ex minister to Italy representing the board of trustees, by Dr William H Welch, of Johns Hopkins University, Baltimore, representing the science of medicine, and by Dr J Chalmers Da Costa, representing the faculty and the alumni After the addresses the building will be thrown open for inspection and a collation will be served. Members of the Association are cordially invited to attend all of these functions and a formal invitation will be sent them if the chairman of the committee of arrangements, Dr H A Hare, 1801 Spruce Street, is notified

The new hospital is equipped not only with all the modern appliances for taking care of the sick in every department of medicine and surgery, but has also been constructed with the dominant idea that it is a teaching hospital, and every facility is, therefore, provided for the adequate instruction of students

University of Pennsylvania Clinics

The University of Pennsylvania will give clinics for visiting physicians who happen to be in Philadelphia on their way to and from the session The schedule is as follows

MONDAY JUNE 3

Some Principles of Dietetics by David L Edsall at 9 a m in the University Hospital
Exhibition of Gynecologic specimens by Dr C Norris from 10 to 12 in the Gynecologic Laboratories
The Diagnosis and Treatment of Arteriosclerosis by Dr Alfred Stengel 12 m in the University Hospital
An Obstetric Clinic by Dr B C Hirst from 12 to 3 in the University Hospital
Surgery of Trifacial Neuralgia by Dr Charles H Frazier at 2 p m in the University Hospital
Demonstrations of the Workings of the Department of Physical Education by Dr R Tait McKenzie from 2 to 5 p m in the Gymnasium
Gynecologic Clinic by Dr John C Clark from 3 to 5 p m in the University Hospital
Practical Demonstrations in Blood Examinations by Dr William Pepper from 3 to 5 p m in the Medical Laboratories
Demonstrations of the Treatment of Disease by Bacterial Vaccines (Wright s Opsonic Theory) by Dr N Gildersleeve from 4 to 5 p m in the Laboratory of Hygiene
Operative Treatment of Suppurating Ears by Dr B Alexander Randall at 5 p m in the University Hospital

FRIDAY AFTERNOON JUNE 7

Surgical Clinic on Renal and Vesical Cases by Dr Edward Martin at 2 p m in the University Hospital
Correction of Deviations of the Nasal Septum and Paraffin Prosthesis of Deformities of the External Nose by Dr Charles I Grayson at 2 p m in the University Hospital
Principles of Modern Arterial Suture (Arterial Anastomosis and Direct Transfusion) by Dr J Edwin Sweet from 2 to 5 p m in the Medical Laboratories
Clinical Lecture on Neurology by Dr Wm G Spiller at 3 p m in the University Hospital
Clinic with Special Reference to Eye Injuries and the Prevention of Infections by Dr C E de Schweinitz at 3 p m, in the University Hospital
Surgical Phases of Splanchnoptosis by Dr John C Clark from 3 to 5 p m in the University Hospital
Intermittent Claudication and Endarteritis Gangrene by Dr David Riesman at 5 p m in the University Hospital

SATURDAY JUNE 8

Medical Clinic by Dr James Tyson at 9 a m in the University Hospital
Demonstrations of Skiagraphy and Skiagraphy by Dr Howard Lancoast from 10 a m to 12 m in the X ray Laboratory of the University Hospital
Diagnosis and Treatment of Arteriosclerosis by Dr Alfred Stengel at 12 m in the University Hospital
Mechanism and Significance of the Initial Chill by Dr Allen J Smith at 1 p m in the University Hospital
Surgical Clinic on Intracranial Lesions by Dr Charles H Frazier at 2 p m in the University Hospital
Medical Clinic on Gastro Intestinal and Hepatic Diseases by Dr John H Musser at 3 p m in the University Hospital
Adaptation of Subcuticular Sutures to Plastic Operations by Dr B M Anspach from 3 to 5 p m in the University Hospital
Aphasia and Cerebral Centers of Speech by Dr Charles L [illegible] at 4 p m in the University Hospital
Demonstrations in Ophthalmic Pathology by Dr C E de Schweinitz C M [illegible] Holloway at 4 [illegible] the Medical Lab[illegible]

Polycythemia by Dr Joseph Sailer at 5 p m in the University Hospital

A bureau of information will be located in the University Hospital, and a buffet luncheon will be served in the same building between 1 and 2 p m

Wills Hospital Eye Clinics

The staff of the Wills Eye Hospital, Eighteenth and Race Streets, Philadelphia, will hold a special clinic for the benefit of delegates and visitors to the American Medical Association on Monday, June 3, at 2 o'clock

Alumni Night and Section Smokers and Banquets

The local Committee of Arrangements desires to announce to the members of the American Medical Association that Tuesday evening, June 4, the first evening of the coming session, has been set apart as Alumni Night as well as for section smokers and banquets Several college alumni have already arranged for reunions of the graduates who will attend the coming meeting to renew old acquaintanceships and to recall the events of college days Dr James W Snowball, 1519 Pacific Avenue, Atlantic City chairman of the Committee on Section and Alumni Entertainments, will give all information desired Section officers who desire special banquets or smokers for Tuesday evening are requested to notify Dr Snowball early so that proper arrangements may be made

Temperance Lunch.

For nearly twenty years the Temperance League has had a temperance breakfast at the annual meeting of the British Medical Association Many eminent physicians of Great Britain have joined on these occasions and expressed themselves freely concerning the alcohol problem At the Toronto meeting last year over 600 were present

The Society for the Study of Alcohol and Inebriety proposes a similar movement at the coming session A number of leading physicians, including nearly all the ex presidents of the American Medical Association, have promised to speak A warm invitation is given to all medical men and their wives to join on this occasion, and as the lunch and speeches will be limited to an hour or more in the middle of the day, it will in no way interfere with the regular work of the Association The secretary, Dr T D Crothers, of Hartford, Conn, will be pleased to give any further information

American Medical Association Outing Club

This club is planning a nine days' trip through the resorts of New Jersey after the session All members of the Association and their friends are invited to join the party For further particulars address Dr Edward R Campbell, Bellows Falls, Vt enclosing stamp for reply

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THE COMMERCIAL EXHIBIT

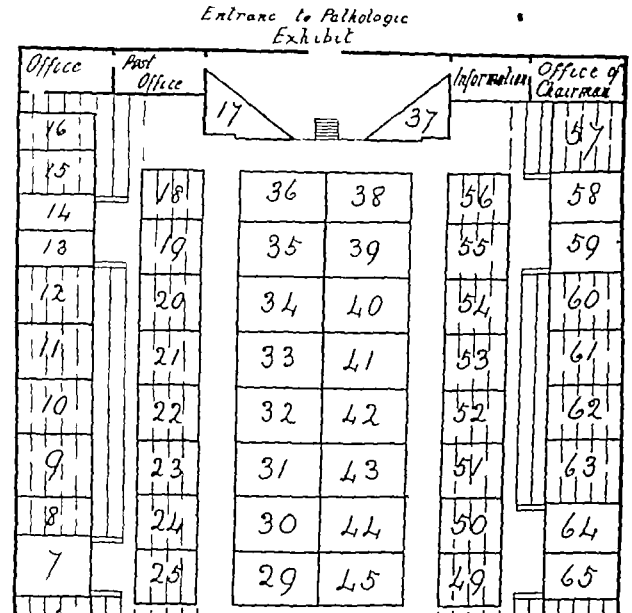
The Exposition of Instruments, Apparatus, Remedial Agents, Literature and Physicians' Supplies at Atlantic City

The most agreeable thing about any successful medical meeting is the solid satisfaction resulting from the interchange of ideas and the personal contact with men having the same aims and ideals Probably the next most pleasing feature about such a meeting is the pleasure got by examining those various appliances, whether mechanical chemical or pharmaceutical, which go to make up the physician's armamentarium Then, too there is no small amount of gratification to be had by looking over the choice specimens of the bookmaker's art that are to be found at these gatherings The visiting physician will without doubt derive a keen pleasure from the Commercial Exhibit to be given at the Atlantic City session This will be enhanced by the absence of some of the few objectionable features that have crept into previous displays It has been the desire of the officers of the Association having supervision of the exhibit to have it excel in quality rather than in size How well they have succeeded will be evident to those visiting it The exposition will be held in the Marine Hall on Young's Pier This pier extends from the well known "Boardwalk" for over a quarter of a mile into the ocean The Marine Hall is the third building from the pier entrance and its position frees it from the objection of too great publicity for a scientific display It is a large rectangular building nearly 150 feet long by 100 feet wide Its interior arrangement is that of an arena with low broad steps extending around its sides This will permit of an artistic arrangement of the exhibits that could not be obtained on a dead level floor At the farther end of the hall and within it will be the post office, general office, information bureau and office of the chairman Just beyond the commercial exhibit and contiguous to it will be the pathologic exhibit The Association members will have a special entrance to the pier, near which will be situated the registration department All physicians are earnestly requested to visit the exhibit hall

We mention below most of the firms that will be represented at this exhibit

Albosol Light Company, Philadelphia—Space 22

This firm will exhibit and demonstrate its neutral diagnostic light, albosol, which, it is claimed, projects an intense light of about one hundred and fifty candle power The light is said to give colors their true value and it can be projected into any cavity of the body, where it shows plainly the various membranes in their true form and color The apparatus for generating this light fits into a leather pocket case and weighs complete only seven and one half ounces



W D Allison Company, Indianapolis, Ind.—Spaces 11 and 12

Several styles of operating and examining tables, covering a wide range of usefulness for the gynecologist and genito urinary specialist, will be shown by this firm It will exhibit a complete line of instruments, medicine and combination cabinets and also a specialists' chair designed especially for eye, ear, nose and throat work Experts trained in the handling of these appliances will be in charge of the exhibit, and will demonstrate the efficiency of these pieces of apparatus

Anatomik Footwear Company, New York City—Space 42

The shoes designed by Dr Harlan P Cole to take the place of braces in the treatment of deformities of the lower limbs will be displayed by this firm Pictures will be exhibited of patients so treated and of the braces formerly worn There will also be shown rational shoes for children and adults which this firm claims perfectly distribute the bodyweight Such shoes, they say, prevent and relieve flatfoot and all strains, and obviate the use of supports of any kind

D Appleton & Company, New York City—Spaces 47 and 48

This company numbers among its publications books by such authors as Osler, Holt, Bryant, Babcock, Kelly, Williams, Keyes, Tuttle and Forchheimer, men whose names are known not only to physicians, but to the world at large for their contributions to science and literature The publications of this firm are mostly of the one volume monographs for the use of the general practitioner

Armour & Company, Chicago—Space 37

Special attention will be directed by this firm to the suprarenalin preparations, desiccated thyroids (U S P) and to the extract of red bone marrow The definite and uniform strength claimed for these suprarenalin preparations should insure uniformity as to dosage and results in their use The use of desiccated thyroids has never been as extensive as it now is in the treatment of myxedema, cretinism, etc. This company's extract of red bone marrow is said to contain in a physiologically active form, the elements which increase formation of red blood corpuscles

B & B Apparatus Company, Salem, Mass—Space 14.

Portable high frequency, x ray and electro therapeutic apparatus and appliances will be exhibited by this firm The exhibit will also include portable high frequency coils of recent design adapted for work by either direct or alternating current Collapsible fluoroscopes, tube stands, etc. intended for use in connection with a portable equipment, will be part of the display, as will also a coil operated static head breeze and other interesting devices and appliances

James Barker, Philadelphia.—Space 53

The makers of the Barker vibrators will have a competent representative in charge to demonstrate to visitors the unique features of these machines The field of mechanical vibration is rapidly broadening and this firm claims the credit of having first brought before the medical profession for study and use the finest apparatus for the purpose that a large and thoroughly equipped plant can produce A visit to its booth will doubtless be worth while, as the exhibit promises to be an interesting one

Baker Electric Company, New York City—Spaces 31 and 32

This company will have on exhibition its various types of static machine The revolving plates of these machines are made of a patent fibrous material, while the stationary plates are of glass The manufacturers claim for these fibrous plates the property of high insulation and guarantee them not to warp, crack or scale The large volume of current said to be developed by these machines is sufficient, when the speed is high, to melt the anode

Bausch & Lomb Optical Company, Rochester, N Y—Space 20

This exhibit will attract the physician who is scientifically inclined The display of microscopes microtomes, centrifuges incubators blood apparatus etc, will be replete with interest Some new and distinct models will be shown The microscope to the modern physician is as necessary in diagnosis as the stethoscope The centrifuge in urinalysis makes a microscopic examination possible in three minutes, which formerly required twenty or more hours

Frank S Betz Company, Hammond, Ind—Spaces 64 and 65

In addition to a general display of surgical instruments, hospital appliances and electrical apparatus this firm will have as part of its exhibit a fifteen inch x ray coil and high frequency outfit combined It also promises to have one of the finest exhibitions of surgical needles ever shown at a medical meeting Besides these there will be shown several forms of lamps used in phototherapy These will include the violet ray the Finsen type and different kinds of incandescent outfits

P Blakiston's Son & Company, Philadelphia—Space 19

What is said to be one of the most thorough works of its kind, The Treatment of Disease by Wilcox will be displayed by this firm This work which is just off the press is the latest word in treatment and therefore supplements any other Practice the physician may have Beck's Surgical Diseases of the Chest is another new book of this firm's which will be brought to the notice of visitors A general display of its medical publications will, of course, be made

Burroughs, Wellcome & Company, England.—Space 40

This firm, which has recently opened a branch at 45 Lafayette Street, New York City, will exhibit a range of "Tabloid" and "Soloid" compressed drugs, etc. These preparations are claimed to be examples of unique accuracy of dosage and perfection of finish Medical equipments of every description will be shown, fitted with medicaments suitable for all climates These are exceedingly compact and can be carried in the pocket, in the carriage or motor car Tabloid photographic chemicals for x ray work, compressed sterilized dressings and other interesting products will be on view

Campbell Electric Company, Lynn, Mass—Space 16

The x ray and high frequency coil for which this firm claims such remarkable results will be on exhibit at its booth Its simpleness, efficiency and the fact that it is always ready are a few of the qualities which the company wishes to demonstrate The D'Arsonval and cautery attachment, with no interrupter to cause trouble and its two year guarantee will force this instrument on the attention of those physicians whose work requires such apparatus

G W Carnrick, New York City—Space 25

This firm will display its products trypsogen and antithermoline, and will distribute a large supply of literature to physicians interested The firm will also give a useful and appropriate souvenir to members of the Association Visiting physicians will be cordially welcomed and inquiries relating to the products of this company will be answered by its representatives Its product antithermoline will be exhibited in the new style glass container which is claimed to possess obvious advantages over the metal containers formerly used

Clark & Roberts Company, Indianapolis, Ind—Space 33

A complete line of surgical furniture for physicians' offices and for hospitals will be the feature of this firm's exhibit It is said to be especially high class, and all of the articles are designed for well equipped offices and hospitals The goods are made in accordance with the latest scientific principles and designed for thorough asepsis The firm places particular stress on the finish of its goods great care being taken with the enamel so as to make it both durable and handsome

Cleveland High Frequency Company, Cleveland, Ohio Space 41

This company will show its high frequency machines which work independent of a coil or static outfit by simply plugging into any ordinary incandescent lamp socket An expert on high frequency currents will be in charge of the exhibit, to go into the subject from a scientific standpoint with any inquiring physician The increased interest in high frequency therapy will doubtless cause their expert to be kept busy

G A Crayen & Company, New York City—Space 8

The Green Cross elastic band of Braun is one of the specialties this firm will exhibit This bandage which contains no rubber is a cotton product with a stretching capacity of 50 per cent If after long usage it shows a slight loss in elasticity this property can be regained by cleansing it with soap and warm water The Monachia wired plaster bandage will also be shown This is claimed to possess the advantages of pliability lightness hardness and economy in use and to be excellently suited for making longitudinal plaster splints

F A. Davis Company, Philadelphia—Space 50

The exhibit of these well known medical publishers will contain several new publications of exceptional importance Among them may be mentioned Fischer's "Diseases of Children a volume of over 1000 pages profusely illustrated Boas "Diseases of the Stomach" translated by Bernheim a work of great practical value to all practitioners also Mendel's Psychiatry translated by Kraus which takes up this subject on new lines calculated to simplify the study of mental diseases These standard works will doubtless attract the attention of visiting physicians

Deimel Linen Mesh Company, New York City—Space 51

This company was incorporated in 1895 to exploit the fabric invented by Dr H L Deimel Its exhibit will show all styles and weights of linen mesh underwear for men women and children By a special process of manufacture a soft warm and porous fabric has been evolved called the "Linen Mesh" Since its introduction 12 years ago the product is claimed to have received the most friendly and grateful [illegible] throughout the world This exhibit will [illegible] will enlist the attention of the physician

DeVilbiss Manufacturing Company, Toledo, Ohio—Space 52

In treating diseases of the nose and throat the atomizer and nebulizer have each come to be recognized as a necessary part of the physician's armamentarium This company will have on display in its booth the latest improved nebulizers and atomizers Many of them are new and unique, and all of them of interest not only to the specialist, but to the general practitioner It recommends the atomizer for making applications to the superior respiratory tract and the nebulizer for the applications to the inferior

Electro Surgical Instrument Company, Rochester, N Y Space 46

An interesting display of modern diagnostic instruments as well as of those appliances used in treatment will be given by this firm which manufactures electrically lighted instruments Here will be found cystoscopes, urethroscopes, aurioscopes, bronchoscopes, proctoscopes, specula, etc The lamps in these instruments are said to be of low temperature and high illuminative power All instruments of the tube pattern are supplied with the auxiliary chamber for the reception of the light carrier and lamp, a feature of importance

Globe Manufacturing Company, Battle Creek, Mich.—Space 13

Electrically driven air pumps having among other special features double cylinders, compound compression, ball bearings, vacuum conversion, extra high power, automatic start and stop and automatic belt tightener will be one of the leading displays of this company Its compressed air vibrator, which is adjustable for speed and length and force of stroke and gives direct impact and lateral movement, will also be shown There will be in addition a complete line of nebulizer outfits, providing for vapor vibration and vapor massage

E J Hart & Company, Ltd., New Orleans, La—Space 66

The leading exhibit of this firm will be its preparation, lacbismo This liquid is claimed to contain the hydrated oxid and subcarbonate of bismuth carried to the greatest possible degree of subdivision For this reason its covering capacity is said to be many times greater than that of either the subcarbonate or submitrate salt of the same metal Explanatory literature will be distributed and the firm's representative will be present at the exhibit

Horlick's Malted Milk Company, Racine, Wis—Spaces 26, 27 and 28

The well and favorably known product of this firm will be on exhibit To obtain milk produced under sanitary dairy conditions and as pure as scientific common sense would dictate is the object sought for and attained by this company The hygienic dairying methods, as well as the superior malting of the grains in its own malt houses, have contributed largely no doubt, to the success of Horlick's malted milk as a reliable, pure and nutritious diet for invalids and infants

Hughes Halm Company, New York City—Spaces 11 and 12

This firm, which is the sole agent in New York and Philadelphia for the Allison office furniture will also exhibit a line of instruments of its own manufacture One of the most important of these will be the Bihlmaier vibrator Several other specialties of more than ordinary interest that are handled exclusively by this company will contribute toward making its display one that will attract attention

W T Keener & Company, Chicago—Space 49

A notable line of new medical books will be shown by this company Among the most important will be found von Noorden's "Metabolism and Practical Medicine" in three volumes, and Green's "Encyclopedia and Dictionary of Medicine and Surgery" This encyclopedia, of which three volumes are now ready will when complete consist of ten volumes There will also be Morat's "Physiology of the Nervous System" Starling's "Recent Advances in the Physiology of Digestion" and a new edition of Yeo's "Manual of Treatment" adapted to the new Pharmacopeia The exhibit will doubtless attract book loving physicians

Keystone Electric Company, Philadelphia—Space 18

This company which manufactures "everything electrical," will give an exhibition of its high grade electro therapeutic instruments Wall cabinets, galvanic, faradic and cautery batteries will be shown in various styles High frequency and x ray apparatus leucodescent lamps and types of practically every kind of appliance used in electro therapy will be displayed The manager of the firm Mr Geiger will have personal charge of the booth and will demonstrate the workings of all the apparatus

Lea Brothers & Company, Philadelphia.—Space 56

Medical literature will be well represented by this firm, the oldest medical publishers on the continent. Of interest to the profession will be the first volume of Osler's "Modern Medicine," a work to which the leading medical thinkers of the English speaking world have contributed Even the oldest practitioner regards with affectionate interest Gray's "Anatomy," his first investment in medical literature, which this firm has now published for just half a century The long list of practical works and medical text books will make the exhibit a Mecca for the studious

Charles Lentz & Sons, Philadelphia.—Space 54

The formaldehyd gas generator exhibited by this firm will prove to be of general interest The heads of health departments are not alone concerned with methods of disinfecting, but the subject is a vital one to every general practitioner This apparatus, therefore which is claimed to be simple, efficient and durable as well as under the direct control of the operator, will interest many physicians The firm will also have an exhibit of their surgical instruments and hospital supplies

J B Lippincott Company, Philadelphia—Spaces 35 and 36

In addition to this firm's published line of excellent medical and pharmaceutical publications the attention of the medical profession will be called to several important books in active preparation Among these books may be mentioned "Human Anatomy," by Piersol, and "Ortner's Treatment of Internal Disease," edited by Potter and translated by Bartlett Also the "Diseases of Children," the American translation of which is edited by Shaw and Le Fetra, with an introduction by Holt, and "Roentgen Rays and Electro Therapeutics," by Kassabian The new nineteenth edition of the United States Dispensatory, published May 1, will no doubt attract considerable attention

Mellin's Food Company, Boston—Space 23

The preparation for the home modification of cow's milk, manufactured by this firm, will be on exhibit Especial attention will be given to the demonstration by test tube experiments of the action of Mellin's Food on cow's milk These will show how it inhibits the coagulation of the casein into the tough and indigestible curds which occasion the difficulty of digestion that is encountered so generally by the infant fed with cow's milk as commonly prepared

E B Meyrowitz, New York City—Space 63

Various forms of x ray and ophthalmologic apparatus will be displayed here One of the more interesting will be the Priestly Smith Ward lamp, which has long and short focus lenses and uses a self feeding candle as an illuminant An ophthalmometer table which permits of accurate height adjustment the Berger binocular loupé, lamp controllers, Holmgren's test worsteds, as well as eye, ear, nose and throat instruments, will make the exhibit one to attract the specialist in these lines

Modern Medicine Company, Battle Creek, Mich Spaces 9 and 10

Here will be demonstrated therapeutic lamps of both the arc and Finsen type as well as the incandescent An electric light bath cabinet will be in operation of the type originated and used at the Battle Creek Sanitarium There will also be shown electric heating pads and electric blanket packs of this firm's make as well as other modern appliances such as sinusoidal apparatus, various vibratory machines, etc. The exhibit will be of interest to all physicians using the newer therapeutic agents

V Mueller & Company, Chicago—Space 61

This firm will show a line of first class surgical instruments These will include those for the eye, ear, nose and throat specialist and for the special worker in genitourinary diseases, as well as those for the obstetrician and general surgeon This company imports the famous Weiss knives as well as those of other first class makers While making and selling a general line of surgical instruments it pays particular attention to the above specialties

Physicians' Supply Company of Philadelphia, Philadelphia. Space 21

Various types of sterilizers, nebulizers and centrifuges will be shown by this firm in addition to its exhibit of a complete line of high grade surgical instruments To add to the inter

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SATURDAY, MAY 4, 1907

PERITONITIS AND THE ABSORPTION OF BACTERIA FROM THE PERITONEAL CAVITY

A series of experiments on the processes of absorption from the peritoneal cavity, by Dr B H Buxton,[1] have yielded results which are of great interest in connection with the problems of the treatment of peritonitis, supporting strongly the growing tendency of many surgeons to reduce intra-abdominal manipulations to a minimum The favorable results of the semi-sitting posture, and the claimed disadvantages of peritoneal irrigation are also explained clearly by the observations on experimental animals These experiments demonstrate the extreme rapidity with which bacteria injected into the peritoneal cavity are taken up, within five minutes they are found in the blood in great numbers, and in smaller numbers in the liver and spleen Even greater numbers are found in the lymph nodes of the anterior mediastinum, which they reach from the diaphragm, where absorption occurs chiefly and most rapidly A large number of bacteria are also entangled by a fibrinous exudate on the surface of the omentum, where many are taken up by phagocytes, while some enter the omental lymphatics and are absorbed by this route However, there seems to be practically no absorption of bacteria by any other part of the peritoneum besides the diaphragm and the omentum, the parietal and visceral peritoneum and the mesentery do not seem to possess this function to any considerable degree

When such an organism as the typhoid or colon bacillus is injected into the peritoneal cavity, even in very large numbers, the bacteria that enter the blood disappear again very rapidly, so that the greater proportion vanish in less than an hour, even in animals that subsequently die This initial destruction of the bacteria seems to be due largely to the bactericidal power of the blood, and is nearly complete by the end of two hours, from two hours to six hours the number of bacteria increases somewhat, but from six hours up to forty-eight hours there is again a period of decrease which is probably due largely to phagocytes Animals which die as a result of intraperitoneal injections of typhoid or colon bacilli succumb either about two hours after the injection, or else they survive for twenty-four hours or more, they seldom die during the interval between four and twenty-four hours The reason for this seems to be as follows The colon and typhoid bacilli contain a large amount of intracellular toxic materials (endotoxins) which are not liberated until the organisms are disintegrated Consequently when an animal takes up a great quantity of these bacteria from the peritoneum and destroys nearly all of them within the space of an hour or so, an overwhelming dose of the poisonous intracellular toxins is liberated, and the animal succumbs at once, in spite of the fact that it has killed most of the bacteria that have been injected In case the dose of endotoxins thus liberated is not fatal, the animal may recover, or may succumb to a later multiplication of the bacteria twenty-four hours or more after the injection With the streptococcus the case is different, for this organism is not so rapidly destroyed after injection, and hence a primary overwhelming with endotoxins does not occur, as a result death does not follow until there has been time for an extensive multiplication of the cocci, after twenty-four hours or more

It seems possible to apply these observations directly to the subject of the surgical treatment of peritonitis First, we find that in acute peritonitis the danger is not so much from absorption of bacterial toxins, as from absorption of the bacteria themselves The bacteria seem to enter the blood largely by way of the lymphatics, and they are absorbed chiefly through the lymph channels of the diaphragm, in this process omentum plays an important protective rôle by entangling bacteria and intercepting their passage toward the diaphragm Absorption of bacteria occurs but little or not at all through the parietal, visceral and mesenteric peritoneum, hence the favorable outcome of peritonitis localized in the lower portion of the abdomen In peritonitis following perforation, in which the chief organism is the colon bacillus or the typhoid bacillus, surgical intervention has sometimes been followed by death in a few hours, and this outcome has generally been ascribed to shock Buxton suggests that in these cases death is really due to the entrance into the blood of large numbers of bacteria, which is decidedly favored by the disseminating forces of irrigation, and that instead of shock we really have an overwhelming intoxication with intracellular toxins liberated through the disintegration of the absorbed bacteria Streptococcus peritonitis seems seldom to cause death in this way, the patient generally succumbing twenty-four or more hours after operation Apparently, this organism reaches the circulation readily through generalizing infection, whether there is irrigation or not, but it is not rapidly destroyed, and hence there is no sudden intoxication with endotoxins Later, after the cocci have multiplied greatly enough toxins will be liberated to cause death In the case of colon or typhoid infection, if not enough bacteria enter the blood to cause fatal intoxication at once, the infection may either be successfully terminated, or the bacteria after a time may begin to multiply in the blood and tissues, with a resulting fatal intoxication after

1 Jour of Med Research 1906 xv pp 388 and 1907 xvi pp 17-42

a period of two or more days In any event, these experiments emphasize the importance of the measures which are now being so successfully adopted by many surgeons, the aim of which is to keep bacteria away from the diaphragm by means of posture and the avoidance of irrigation Furthermore, it is to be remembered that pus is not exclusively a dangerous substance, its danger depends on the number and kind of bacteria it happens to contain, for the pus elements themselves are protective agents To quote from Buxton "Pus in the cavity appears to the surgeon as something to be washed away, but it is precisely in the pus that there is protective action due to the innumerable phagocytes which it contains"

While Buxton's experiments support the attitude taken by those surgeons who oppose intraperitoneal meddling in general peritonitis beyond such measures as are necessary to remove the source of the infecting agent, yet it will be noted that they give a different explanation of the facts than has generally been adopted by the surgeons The latter have considered that trauma of the peritoneal coat opens up avenues by which bacterial toxins enter the blood, whereas the animal experiments indicate that irrigation, sponging and similar measures are dangerous chiefly because they disseminate the bacteria so that large quantities can be taken up rapidly by the lymphatics of the diaphragm This is particularly the case with peritonitis due to the colon-typhoid group of organisms

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IMPULSE, CRIME AND PUNISHMENT

It is now generally recognized that certain crimes are committed under the influence of impulses so strong as to be practically irresistible The circumstances in which impulses become so strong have been much discussed It is recognized that if a man has done irrational deeds early in life, that is, if he has performed serious acts entirely disproportionate to the motive urging him to their accomplishment, he is lacking somewhat in responsibility If to this be added the fact that there is a nervous heredity, that is, that certain members of the family in previous generations have behaved irrationally especially in crises of conduct, then, in the opinion of many authorities, responsibility seems to be seriously impaired These are practically the doctrines that the medical profession in the progress of its growing knowledge of mental diseases, has labored with no inconsiderable success, to graft on our criminal code, until now most murder trials have them brought to the fore to such an extent as to require expert testimony, and no criminal trial of importance occurs without at least some reference to insanity At times, as in a recent noteworthy example, most of the attention of lawyers judge jury and above all the public is riveted on this aspect of the case In so doing the medical profession has taken on itself great responsibility and it is well to view from a common sense standpoint the consequences that may follow the application of these principles

Anyone who has had any experience with those of diseased mentality is aware how cunning such people can be Everyone knows how carefully men and women of distinctly lowered rationality may plan in order to secure some wished-for result Many of the murders of keepers that occur in asylums are thought out beforehand with diabolical ingenuity in order to secure the hoped-for result All who have had much to do with such people know, too, that practically the only thing which keeps many of them in proper submission is the deterring influence of punishment and the ignominy (for they have very acute feelings in such matters) that will come as the result of an unsuccessful attempt In spite of the fact, then, that they are irrational and are ready to commit crime under the influence of practically uncontrollable impulse and without any proper reason, they are deterred from it by the thought of punishment and disgrace In a word, though acting irrationally, they yet realize the nature of their act and, if punishment were certain to follow, would be deterred from it

If we continue to loosen the claims of justice on all those who commit crime on impulse we shall lose those deterring influences of due condemnation and just punishment which are even greater over those of lowered mentality than over rational individuals There are not many now who think that capital punishment is justified as a compensatory factor Most persons consider that its deterring influence is the only reason for maintaining it As a matter of fact, under the circumstances that surround many fatal crimes, responsibility is more or less impaired at the moment of commission Men, however, put themselves in the conditions in which they know that such impairment may take place and are consequently responsible for their acts, though these may not be done with entire deliberate free will at the moment If the present trend of medical opinion is not properly safeguarded in its diffusion among the public, many of those who are a little irrational and who are conscious of the fact that these irrationalities and certain hereditary traits may prove sufficient to keep them from capital punishment will be tempted to the commission of crimes by violence There are many more people than is ordinarily imagined who are more or less irresponsible, who can not be taken care of by friends, nor committed to asylums For them the deterrent effect of capital punishment or indefinite loss of liberty is society's only protection This fact will have to be taken into consideration or we shall have a veritable epidemic of crime against human life (which seems indeed to be beginning) because of lack of punishment Insanity ought not to prevent conviction for murder but the fact that it is a mitigating circumstance ought to change the punishment to confinement in an asylum

Andrew D White said not long since that human life is cheaper in this than in any other country in

the world except Sicily The delays of justice and the many loopholes of our criminal procedure are responsible for this condition Is it not possible also that the medical expert has added to it? At least we must be careful that all sides of this important question of responsibility be considered It is better that ninety-nine guilty should escape than that one innocent man should be punished, but impulsive criminals are not innocent in the real sense of the term The only motive that will keep many of them from cunningly taking advantage of the present trend of opinion is to maintain the sanction of law by properly meted out punishment, whether capital or not depends on circumstances, but with the stigma of a murder verdict properly to characterize the crime

ROENTGEN RAY CASUALTIES

Examples attesting the dangers due to the unskillful use of the x-ray are becoming of rather disconcerting frequency Here we read of the inhibition of muscular action, there of the appearance of indolent malodorous ulcers which take many months to heal All will recall the fate of Dr Weigel of Rochester, who was so injured during his experiments that first three fingers of his left hand had to be amputated, then his left hand, then his left arm at the elbow and later at the shoulder Death, however, was inevitable

The death of Wolfram C Fuchs, of Chicago, on April 24, is the most recent in a dreadful series of disasters which must be attributed to the x-ray Mr Fuchs first became afflicted in 1905, and in the fall of that year the first joint of the right thumb was removed, from that time to his death he underwent five other operations, first for the removal of portions of the fingers of both hands, and later for a removal of the muscles of the right pectoral region Other victims have been an assistant to Thomas A Edison, a Boston colleague, and Bertha Fleischman, of San Francisco

Pitkin[1] some time ago warned us against the destructive properties of the x-ray Its effects are cumulative, the danger to the operator increases in a compound multiple ratio, with nearness to the tube, its size, hardness and degree of excitement, the number, frequency and duration of exposures, with physical conditions below par The operator is apt to be injured without premonition After a time the color of the hands and face changes, on this swelling ensues, then a few pruritic papules or pustules, with bran-like scales, or an "itching' warmth, local diaphoresis cutis anserinus and a glossy appearance of the parts, with edema Muscular action becomes inhibited Further exposure induces inflammation, disintegration, intense itching, with successive crops of papules, followed by a honeycombing of small, indolent ulcers which may become confluent with a sanious malodorous discharge As sequelæ may occur loss of skin, with the appendages, dreadful disfigurements—scars, pits and pigmentation—the loss of sebaceous and sweat glands, anesthesia, hyperesthesia to all forms of radiant energy, increased vasomotor activity, defective vision, and many other most unfortunate manifestations

That Pitkin's warnings received not nearly the respect that ought to have been paid them was evidenced by the observations subsequently made by Brown and Osgood[2] in some eighteen cases of x-ray workers who had consulted them These colleagues had been men in robust health, whose ages ranged from 22 to 40 years Twelve of them had operated x-ray tubes from one-half to four hours at least thrice a week during the greater part of each year for from two to six years past Six of them suffered more or less severe dermatitis of the hands It was demonstrated, moreover, that the emanations from the tube are capable of affecting subdermal tissues without apparently affecting the skin itself Brown and Osgood have found also that repeated prolonged exposure in an x-ray atmosphere produces sterility in the human subject. And this phenomenon has received repeated corroboration by Pitkin, Foersterling, Schmidt, Lassar, Geyser and others, who have found the x-rays destructive of embryonic life and who have not only sterilized by this means mature rabbits, guinea-pigs and fowls, but have also retarded the growth of the young The destructibility of this agent when applied to seeds and grasses has been abundantly demonstrated

The German Roentgen Society, meeting recently in Berlin, has recommended that the use of the x-ray be restricted to licensed practitioners In any event the use of this agent should not be permitted the unscientific or the unscrupulous Adequate protection to all parts of the patient's body not directly exposed for examination or treatment should be universally provided, else a perfectly just malpractice suit may be incurred

The physician should learn from the many precautions now set forth in the literature for his benefit how to guard himself against the injurious effects of the x-ray, as well as to profit by "the beneficent effects of the force at which we have all marveled since Roentgen's discovery put into the hands of the medical profession this great aid to our diagnosis and gave impetus to the development of a valuable addition to our therapeutic measures"

THE ADVERTISING SWINDLER.

Opinion on any subject is largely dependent on the mental perspective Only on such an assumption can we explain those incongruities of thought and action which we see daily A case much to the point is exhibited in an editorial that appeared in a Chicago evening paper of recent date[1] In referring to the aid given an unscrupulous but plausible advertiser by the press in sell-

1 Pitkin (J T) Dangers of the X ray Virginia Med. Semi Mo Feb 12, 1904

2 Brown (F T) and Osgood (A T) X rays and Sterility Amer Jour Surg April 1907

1 Chicago Daily News April 16 1907

ing him advertising space in which to exploit his get-rich-quick schemes, the paper sums up as follows "It is an outrage for any newspaper to trade on the trustfulness of its readers in order to share in the profits of swindlers Reputable patrons of newspapers should demand that they cease to be the beneficiaries of financial sharks through the acceptance of advertising which has fraud written all over it in the light of ordinary business judgment A newspaper must be honest in its advertising columns as well as elsewhere in order to be really honest" The sentiments expressed are commendable, though—considering the case—somewhat trite, the policy outlined is praiseworthy—and likewise obvious The incongruity of the thing becomes apparent when we glance through the advertising pages The notorious "hypothetical cocktail" Peruna, and the equally well-known alcoholic nostrum, Lydia Pinkham's Compound are found occupying conspicuous places Mother's Friend, one of those damnable concoctions whose advertisers play on the feelings of dread uncertainty and fear that possess the expectant mother, is seen shouting its blatant warnings with scare headlines Cures for drunkenness, cures for Bright's disease, cures for rheumatism and cures for epilepsy, each has its appointed place in this gallery of frauds Must we conclude that the editor believes that "Bright's disease of many years standing" was "entirely cured with Warner's Safe Cure," that Golden Remedy "never fails to cure the worst cases of drunkenness;" that S S S positively "cures skin diseases of every form"? Are we to understand that the editor honestly subscribes to all this? Editorial opinion would seem to oppose the idea that the same rule holds with this paper as obtains in some medical journals To keep the editorial and advertising departments entirely distinct But examination of the paper forces us to the conclusion that the business policy of the paper is not reflected in the editorial columns Is it possible that the returns from fraudulent medical advertisements are sufficiently large to purchase immunity to criticism? This much at least is certain—so long as the paper continues to exploit such frauds, so long is it trading "on the trustfulness of its readers in order to share in the profits of swindlers" In giving space to these nostrums, advertising is accepted "which has fraud written all over it in the light of ordinary business judgment" As is said in another part of this same editorial, the "fact that a trusted newspaper permits him" (referring to the financial instead of the medical shark) "to do his lying under its auspices, convinces the credulous and they place"—not their savings, as in the case written of—but their health and lives "in his unscrupulous hands"

WHAT IS FEVER?

Various definitions of the febrile process have been given, but none is entirely satisfactory by reason of the incompleteness of our knowledge concerning the underlying mechanisms Fever has been attributed to excessive oxidation but convincing demonstration is lacking that increased amounts of oxygen are constantly taken up by the body and increased amounts of carbon dioxid are constantly given off or that an increased amount of heat is generated or a deficient amount dissipated That fever and pyrexia are not one is generally recognized although the latter usually though not always accompanies the former Dr Woods Hutchinson[1] indulges in an interesting disquisition on this subject, expressing the view that the phenomena of fever appear to be due to a general disorganization and perversion of normal metabolism by toxins, with conversion of the energy ordinarily expended in secretion, growth, motion etc into the waste product, heat He holds that metabolism is less active during the febrile process than in health and that it is chiefly destructive instead of constructive The resulting harm is due not so much to the elevation of temperature as to the action of toxic substances, which, if present in sufficiently large amounts or of a certain degree of virulence, may actually depress the temperature below the normal When elevation of temperature does take place it may perhaps play the part of a secondary protective agency, affecting unfavorably the active pathogenic micro-organisms In Hutchinson's opinion the "standard" of fever should be an increase in the daily range of temperature in excess of 1 5 degrees Fahrenheit

THE ATLANTIC CITY SESSION

The fifty-eighth annual session of the American Medical Association will be held June 4 to 7 at Atlantic City, and we devote several pages this week to a description of that popular resort The preliminary program of each section is also published, and a glance at the titles of the articles will show that a high grade of scientific work is in store for those who attend the meetings This will make the third time that the Association has met at Atlantic City, and consequently a description of the town is hardly necessary for many of our readers Since the last meeting there however, the membership of the Association has nearly doubled and in any event this seaside resort has so many attractions that its advantages will bear repetition It is the ideal meeting place for the reason that it has ample hotel accommodations of a character to suit both those who want to pay but a moderate price as well as for those who desire all the luxuries The railroad rates this year are very low—practically one fare for the round trip—but what is of special advantage is the fact that the time limit is longer than on former occasions As will be noticed by a reference to the paragraph on railroad rates members may get an extension to June 18 This will give an opportunity to utilize the clinics, etc, that are to be given in Philadelphia during the week following the Association session, to recuperate on the seashore or to enjoy a side trip to the famous eastern metropolis New York or to the Jamestown Exposition perhaps by a delightful boat trip on the picturesque Chesapeake Bay or to stop for a few days in the Nation s Capitol The Atlantic City people are making as elaborate preparations as were made at any former session and they are evidently determined to make the visit of the members of the Association an agreeable one While it is impossible to prophesy so early the present indications are that the attendance at the coming session will equal if it does not exceed that of last year at Boston

1 Practitioner April 1 07 p 4 6

Medical News

ALABAMA

Medical Journal Company Incorporated—The Alabama Medical Journal Company has been incorporated at Birmingham with a capital stock of $3,000 The company has purchased the *Alabama Medical Journal* from the estate of the late Dr John C LeGrande, and intends to continue the publication of the journal

Personal.—Dr Willis W Scales, Mobile, has been appointed assistant surgeon in the United States Public Health and Marine Hospital Service——The following staff of the Mobile City Hospital is announced Surgeons, Drs William McD Mastin, George E Gavin, Douglas G Campbell and William G Ward, physicians, Drs Joseph Schwartz, Ernest S Feagin, James J Peterson and Nicholas A. Madler, obstetrician, Dr Percy J Howard, pathologist, Dr Neal E Sellers, and dermatologist, Dr M Toulmin Gaines

CONNECTICUT

Venerable Practitioners—Dr Ralph J Griswold, Greenwich, will celebrate the fiftieth anniversary of his entry into the practice of medicine, April 15——Dr Gurdon W Russell, Hartford, for many years medical director of the Ætna Life Insurance Company, celebrated his ninety second birthday anniversary, April 10

Vital Statistics—The vital statistics of Connecticut for 1905, about to be published, shows that 23,271 births were recorded in the year, an increase of 407 over the previous year, and the highest number ever recorded The number of marriages recorded was 8,075, or 440 more than for the previous year There were 16,298 deaths, or 16 4 per 1,000, which is a slight increase as compared with the previous year

DISTRICT OF COLUMBIA.

Personal—Dr Luther H Reichelderfer, superintendent of the Garfield Memorial Hospital for seven years, has resigned to enter private practice, and has been succeeded by Dr Wayne F Cowan——Dr Eugene L. LeMerle has been appointed by the commissioners medical inspector in the contagious disease service, vice Dr C Norman Howard, resigned

New York Milk Barred.—The Department of Health of the District of Columbia, in its battle for the certification of all milk, has rejected the permits of certain New York shippers and considers the ordinance at present before the Board of Aldermen in New York City as mild in its requirements as compared with regulations in the District of Columbia The District also declares that cows imported from the Empire State are more generally affected with tuberculosis than are those from other states farther south

ILLINOIS

Personal.—Dr Edward Hassen, Peoria, has been appointed a member of the local Board of Pension Commissioners, vice Dr Alvin N Keith, resigned——Dr Downing D Nice and family, Bowen, will leave in a few weeks for their new home in California——Dr and Mrs Hiram E Johnson, Fairbury, have returned from Crescent City, Fla, where they spent the winter

State Society Meeting—The annual meeting of the Illinois State Medical Society will be held in Rockford May 21 to 23 The local committee announces that the places for holding meetings will be within one block of the principal street of the city and within three blocks of all the hotels The general session and sessions of sections will be in the Church of the Christian Union and the House of Delegates and committees will meet in the Soldiers' and Sailors' Memorial Hall A novel feature of the scientific portion of the meeting is the joint sessions of the medical and surgical sections A part of the section is to be devoted to medicine another part to surgery and a third to borderland topics On Wednesday night a banquet is to be given at which special honor is to be paid to Drs John H Hollister Chicago and F O Ensign Rutland who celebrate the fiftieth anniversary of their membership in the society

Chicago

Scarlet Fever Spreads—Scarlet fever is reported to be prevalent and threatens to become epidemic in South Chicago

Personal—Dr and Mrs Daniel R. Brower have returned from a trip to Egypt and Palestine——Dr and Mrs Clifford C Crulee sailed for Europe April 27

Auto Run to Rockford—It is reported that 50 physicians of the city expect to participate in an automobile run from Chicago to Rockford, May 20

Emergency Inspectors Discharged.—The 259 employés of the health office, whose services were secured during the recent scarlet fever epidemic, have been discharged on the expiration of the period for which they were engaged

X-Ray Expert Dies—Wolfram C Fuchs, one of the earliest and best known exponents of the Roentgen ray, died at his home in Chicago, April 24, from cancer, said to have been due to prolonged exposure of the Roentgen rays Mr Fuchs was an electrical engineer, but became interested in the *x* ray treatment of disease when Roentgen's researches were first published, and was one of the first in Chicago to use this method of treatment and to take *x* ray photographs

Deaths of the Week—The deaths for the week ended April 27 were 678, or 61 more than for the preceding week, the respective annual death rates being 16 77 and 16.26 per 1,000 Of the chief death causes, pneumonia was responsible for 118 deaths, heart disease for 63, consumption for 55, Bright's disease for 43, violence, including suicide, for 39, and acute intestinal diseases and cancer, each for 30 Scarlet fever caused 17 deaths, diphtheria 13, influenza 7, whooping cough 6, measles 5 and typhoid fever 3

The New Health Commissioner's Creed.—In the first communication of Health Commissioner Evans he addresses his co workers as follows

If we succeed it will be due to three factors
1 The efforts of Drs Whalen Reynolds and their predecessors who have increased the efficiency of the department year by year until it has reached its present position I wish sincerely to acknowledge our debt to them
2 The support of the men of the department.
I must have their help not only in matters of routine, but in planning and managing and in solving great community problems It must be our department.
3 We must have the support of the people and the press

MARYLAND

Site for Sanatorium Bought.—The Maryland Tuberculosis Sanatorium has purchased, for $10,000, 192 acres at Sabillasville, as a site for a tuberculosis sanatorium

School Rooms for Epileptics.—A canvass of the public schools of Baltimore shows that there are 51 children suffering from epilepsy The school board has decided to establish two or three special classes for epileptic children, beginning with the next school year

Society Meeting—At the annual meeting of the Montgomery County Medical Society, held in Rockville, April 16, Dr James E. Deets, Clarksburg was elected president, Dr Charles Farquhar, Olney, vice president, Dr John L Lewis, Bethesda, secretary and treasurer, and Dr Horace B Haddox, Gaithersburg, censor

Personal.—Dr Montgomery E Higgins, Boyds, has returned from Panama, and expects to leave this month for Europe——Dr Frederick H Baetjer, assistant in actinography at Johns Hopkins Hospital, Baltimore, was operated on for appendicitis, April 19——Dr Charles G McGill, Catonsville, is reported to be critically ill.——Dr L Gibbons Smart has leased a house with 11 acres of land, near Lutherville, for a private sanitarium——Dr Henry W Hodgson has been elected president of the Lonaconing Club

Tuberculosis Sanatorium—About 200 acres of land in Frederick County, near Blue Ridge Summit, has been purchased for the Maryland Tuberculosis Sanatorium The site is 1 500 feet above sea level and the buildings are already in process of construction Accommodation will at first be secured for about 75 patients At present, $90 000 is available for the institution, but it is hoped that $150 000 may be appropriated to complete the buildings and to increase the annual appropriations for maintenance from $15,000 to $20 000

Baltimore

Measles Prevalent—During the week ended April 13 there were 105 cases of measles reported with 5 deaths, as against 10 cases in the corresponding week of last year

Personal.—Dr Henry Barton Jacobs has been elected a member of the Maryland Tuberculosis Commission——Dr Ira Remsen of Johns Hopkins University was elected president of the National Academy of Sciences at its meeting in Washington April 17——Dr Roland B Whitridge has gone to Europe for several months

Hospital for Hebrew Consumptives.—Mr Jacob Epstein has given $25 000 toward the establishment of a hospital for Hebrew consumptives with the understanding that the management of the institution shall be assumed by the Federated

Jewish Charities Four individuals have offered $500 annually toward the maintenance of the hospital, and a special committee has been appointed to consider ways and means

MASSACHUSETTS

Diphtheria—An outbreak of diphtheria is reported at Milton and Dorchester Lower Mills, where more than 50 cases have been reported, with two deaths

Fitchburg in Line—Fitchburg has organized an association for the prevention and cure of tuberculosis, and among its officers are Drs Frederick H Thompson, Cordelia M Whittier and Herbert J Wallace

Medical Library Committee—A committee consisting of Drs Walter H Chapin, Walter R. Weiser and James B Comins has been appointed to confer with the physicians and medical societies of Springfield, to determine what amount the physicians of the city will agree to give annually per capita for the support of a medical library

Personal—Dr Thomas J Scanlan, Dorchester, Boston, has been nominated as physician of the fire department——Mr Alexander M Wilson, Boston, who has been superintendent of the Massachusetts Association for the Relief and Control of Tuberculosis, has resigned, to take charge of the Chicago Tuberculosis Institute, and will take up his work there June 1——Dr Edmond A Bazin, Haverhill, was seriously injured in a runaway accident, April 18——Dr Willis L. Tucker has been appointed town physician of Hinsdale——Dr James J McDevitt, East Boston, has been appointed deputy health commissioner——Dr James R. Berwick, Methuen, has been reelected town physician——Dr Albert Taft has been removed from his position as resident physician at the Penal Institutions, Deer Island

MISSOURI

Graduation—The annual commencement exercises of the St Louis College of Physicians and Surgeons were held April 26 Dr Waldo Briggs, dean of the college, conferred the degrees and Dr Otto Sutter delivered the faculty address

Hospital Notes—The Board of Directors of Provident Hospital, which was established twelve years ago by a number of physicians and citizens for the care and treatment of colored patients, is endeavoring to raise $25,000 to purchase a suitable site on which a permanent hospital building may be erected

Hodgen Memorial Meeting—At the meeting held under the auspices of the St Louis Medical Society of Missouri, April 27, to commemorate the twenty fifth anniversary of the death of Dr John T Hodgen, Drs John C Morfit, president of the society, and Warren B Outten chairman of the committee of arrangements, jointly presided A life size oil painting of Dr Hodgen occupied a conspicuous place on the stage. Dr Joseph M Mathews, Louisville, who spoke on "Dr Hodgen as a National and International Figure in Medicine," eloquently compared him to Lincoln and Daniel Drake and asked the question whether the spirit of self sacrifice of the public weal, of intense thought and application which distinguished Dr Hodgen, fills the lives of the practitioners of to day and whether men have not now become so imbued with the spirit of the present times that they allow other things than sturdy accomplishments, honest motives and high principles to actuate them He advocated that a tablet to Dr Hodgen's memory be placed in the "Hall of Fame" Dr Warren B Outten St Louis, who spoke on The Educational Influence of Dr Hodgen in the Mississippi Valley" told how his students reverenced him, and how marked his influence had been on the profession of the West Dr Charles H Wallace St Joseph president of the Missouri State Medical Association who bore witness to "The Debt of Missouri to His Example and Memory," spoke of the benefit to the human race of Dr Hodgen's skill and learning Hodgen he said was one of the great men of the age Hon Charles Nagel St Louis paid an eloquent tribute to "His Worth as a Citizen" Rarely he said were such forces of mind and fundamental principles of character united in one man He was a universal man not too great for any one profession but great enough for any one to make it redound to the benefit of the human race He was essentially an American citizen and in everything he did there was the all pervading influence of the citizen and the man Dr Henry C Fairbrother East St Louis Ill to whom was assigned "His Power and Influence as a Teacher Over His Classes" referred to Dr Hodgen as the George Washington of the medical profession He was beloved and reverenced by his students each of whom felt that in him his professor took an especial and personal interest Dr Le Grand Atwood Ferguson, Mo who was a fellow student and roommate of Dr Hodgen, spoke on "His Student and Social Life," and narrated many reminiscences of the student life of the great surgeon He was a physical and mental giant and exhibited all the virtues and excellencies that go to make up the real man Dr Charles D Stevens, St Louis secretary of the committee of arrangements, then read letters of regret from physicians who were unable to be present, but added their tribute to the memory of Dr Hodgen.

NEW YORK.

To Defeat Optometry Bill.—The Medical Society of the County of New York has sent a letter to its members asking them to use personal influence with their representatives in order to secure the defeat of a bill regulating the practice of optometry which makes partial doctors of opticians This bill passed the Assembly April 23 It would create a new profession, and make an entering wedge for the making of specialists of men who are not qualified by education or training for the work which the bill authorizes them to do If this bill became a law other bills might follow creating separate professions for makers of orthopedic apparatus trusses etc and for vibrationists and others so that the profession would consist of divisions of practitioners imperfectly educated and trained and licensed to practice under separate laws, which would not be advantageous to the public or to the medical profession

New York City

Personal.—Dr Marcus E Peterson, Brooklyn was thrown from his carriage and seriously bruised in a collision with an automobile, April 18——Dr Joseph F Todd, Brooklyn has been appointed attending gynecologist to St Peter's Hospital, Brooklyn——Dr Arthur R. Eddy, Manhattan, has been appointed assistant surgeon N G, N Y, and assigned to the Seventy first Infantry

Many Smoke Protests—The Anti Smoke League obtained a conviction against the New York Edison Company on April 22, and since that time numerous complaints have been pouring in from all over the city calling attention to the violation of the sanitary code in the use of soft coal The disposition of small offenders is to adopt means of preventing smoke where soft coal is used, and it is possible to adjust furnaces to such methods

New Clinical Society—The medical staff of the New York Throat, Nose and Lung Hospital has organized a society known as the Clinical Society of the Hospital Members and ex members of the staff are eligible to membership The officers are as follows President, Dr Elmer A Miller vice president, Dr Sam Goldstein, secretary, Dr Charles F Walter, treasurer, Dr M C Tracy, hospital committee Drs Stephen D Harrison James J Concannon and M I Schamberg, and scientific committee, Drs Samuel J Kopetzky, F R. Kemple and John A MacIsaac

The Mosquito Doomed—Dr Alvah H Doty, health officer of the Port of New York, says that he will make good his promise of five or six years ago that at this time Staten Island would be practically free from the salt water mosquito He began the work in 1900 The only way in which the work could be done was by draining At first much opposition was encountered but the system of drainage has resulted in reclaiming much land that was formerly valueless Dr Doty intends to turn his attention to the study of the different varieties of mosquitoes of New York and vicinity, and expects to find that much disease is transmitted through this agency

Aid for Hospitals—The funds raised by the Saturday Hospital and Sunday Association amounted to $103 110 of which $1 555 was derived from the offer of Mr and Mrs Jame Speyer to duplicate all gifts after $100 000 had been raised The allotment was made to hospitals on the basis of fre work done The Montefiore Home and Hospital and Mount Sinai Hospital received the largest awards $8 400 each St Lukes Hospital received $4 617 Roosevelt Hospital $4 427 German Hospital $4 119 Lebanon Hospital $4 074 Hospital for the Ruptured and Crippled $3 673 Postgraduate Hospital $3 504 New York Infant Hospital $2 199 Society for Lying in $3 295 Orthopedic Dispensary and Hospital $2 104 St Marys Free Hospital for Children $2 042 and other received lesser amounts——The Presbyterian Hospital will receive between $120 000 and $150 000 by the will of the late Peter Cumming

NORTH CAROLINA

College Commencement—The fifteenth annual commencement of the North Carolina Medical Col [illegible] Davidson [illegible] held at Charlott April 16 [illegible] The addre to the graduate w [illegible]

Pressly, Augusta, Ga The new building of the college, which was erected at a cost of $30,000, was opened to the public on this occasion for the first time .

Personal.—Dr Thomas Stringfield, Waynesville, has been appointed inspector general of the North Carolina National Guard, with the rank of colonel——Dr Charles B Woodley, Kinston, has been elected supreme ruler of the Fraternal Mystic Circle——Dr Gaillard S Tennent, Asheville, has gone to Baltimore for six weeks' postgraduate work——Dr William H. Cobb, Goldsboro, is taking postgraduate work in the University of Pennsylvania laboratories, Philadelphia——Dr Henry F Long, Statesville, is building an addition to the Long Sanatorium to accommodate ten additional patients

OHIO

Newspaper Notices—The Marion County Medical Society, at its last meeting, passed resolutions forbidding the members of the society to give items to newspapers regarding cases in which they are interested.

Graduate Course—A course of lectures, laboratory work and clinics for graduates at the Medical College of Ohio, Medical Department of the University of Cincinnati, is announced to begin April 15 and to continue until June 1

Elections.—At the semi annual election of officers of the Association of Assistant Physicians of Ohio State Hospitals, Dr Earl E Garver, Columbus, was elected president, Dr Frank Day Ferneau, Toledo, vice president, and Dr Isabelle A Bradley, Columbus, secretary——The Second Councilor District Medical Society, at its annual meeting, held in Springfield, April 11, elected the following officers Dr J Robert Caywood, Piqua, president, the presidents of the various constituent societies, vice presidents, Dr Asa C Messenger, Xenia, secretary, and Dr Webster S Smith, Dayton, treasurer

PENNSYLVANIA

Spotted Fever in Pittsburg—Anxiety is felt in Pittsburg on account of the prevalence of cerebrospinal meningitis During March and April 17 cases occurred, with 11 deaths

Personal—Dr Charles D Schaeffer has been elected mayor of Allentown, vice Dr Alfred J Yost, deceased——Dr Gaetano Conti, Pittsburg, is to be the guest of honor at a banquet given by the Italians of the city, May 8

Philadelphia.

Personal.—Dr DeForest Willard, who has been ill for a year, has returned from the South greatly improved in health and has resumed professional work——Dr John B Deaver has been appointed consulting surgeon to the Philadelphia Hospital, vice Dr John H. Brinton, deceased——Dr George M Piersoll, chief resident physician at the University Hospital, was given a banquet by the physicians and nurses of the hospital at which he was presented with a silver loving cup He is soon to go abroad

RHODE ISLAND

Gives Hospital—Mrs Ann Crawford Allen Brown has presented the estate of her late husband at Quidnesset, to the Rhode Island Hospital, to be used as a hospital for children afflicted with tuberculosis of bones The gift is in memory of the late Crawford Allen, and comprises a large brick residence and 100 acres of land

Tuberculosis Exhibit.—The traveling tuberculosis exhibit was opened in Providence during the week of March 18 It included both the exhibition of the National Association for the Study and Prevention of Tuberculosis and that of the Boston Association for the Relief and Control of Tuberculosis, together with exhibits from Rhode Island institutions

Personal.—Dr Maude A E Kenney, Providence, was brutally assaulted in her father's residence by a burglar, recently——Dr Henry J Hoye, Providence, was seriously injured by the fall of a counterweight, used to grip cars on the College Hill incline His face and hands were badly lacerated——Dr E T Hoffman, formerly interne at the Good Samaritan Hospital, Providence, has been appointed receiving physician at the City Hospital, Cleveland, Ohio

GENERAL

Delegates to Red Cross Meeting—Surgeon General Robert M O'Reilly, U S Army and Medical Director John C Wies, U S Navy, have been selected as delegates from the American Red Cross Society to the International Red Cross meeting in London

CANADA.

Another Fire at McGill University—A second fire has occurred at this university within a few weeks This time the fine four story building of the medical faculty has been totally destroyed Dr F J Shepherd, professor of anatomy, has lost his anatomic museum, Dr Ruttan, professor of chemistry, all his private library which he kept in the building, Dr J George Adami, professor of pathology, nearly all his pathologic museum and his private library which he kept in the building for the benefit of the students The latest report states that he managed to save the manuscript of a new work on pathology on which he has been working for many years. Among the many fine pathologic specimens which had been collected by McGill none was finer than the collection of calculi, in fact, it was said to be the finest in the world The Osler collection was also entirely destroyed These specimens Dr Osler collected while he was pathologist to the Montreal General Hospital The main building of the Medical Faculty of McGill was erected in 1873 Large additions and alterations were made in 1885 and again in 1893 It was at this time that Lord Strathcona endowed the chairs of pathology and public health with $100,000 Six years after he again contributed $100,000 for the development and extension of the museums, laboratories and library The latter contained 24,000 volumes and was completely destroyed This is the seventy fifth session of McGill, and the students enrolled in the medical department numbered over 400 Coming so quickly on the destruction of the engineering building, incendiarism is suspected and an investigation is proceeding

FOREIGN

Politzer's Retirement—At the end of the summer term, 1907, Prof A. Politzer will have arrived at the age beyond which, according to the laws of Austria, he may not retain his chair at the University of Vienna He will therefore resign this position, as well as that of the head of the Vienna ear clinic The lectures which he has delivered for the past forty six years will cease A formal celebration had been planned, but Professor Politzer requested that in view of the fact that a number of deaths had occurred in his immediate family, no public celebration take place Dr Hugo Frey, Vienna, informs us that it has been decided to present to Professor Politzer a gold medal bearing his portrait made by a renowned sculptor Copies of this medal, some in silver and others in bronze, will also be struck off to serve as souvenirs These will be disposed of at $5 and $2 50 each, respectively, and the names and addresses of all subscribers will be presented with the gold medal and address to Professor Politzer Dr D Kaufmann, Vienna, vi, Mariahilferstrasse 37, will receive all communications and remittances Any surplus there may be will be put at Professor Politzer's disposal as a fund to further some scientific object.

Thirty sixth Congress of German Society for Surgery—As mentioned elsewhere, this congress was held at Berlin, April 3 6, and Rehn opened the proceedings with a summary of what has been accomplished with surgery of the heart since he first attempted it in 1897 He does not approve of cutting a large flap for access, and stated that by temporary compression of the veins with the fingers the suture can be done on the practically empty heart Riedel and Kümmell reported that exposure of the heart and direct massage had not proved successful in their hands in resuscitating patients in "chloroform death" The momentary effect was remarkable, but actual life was not restored Küttner related the clinical cure of a patient with leukemic wandering spleen treated by splenectomy, and Bakes an interesting case of hour glass stomach treated by gastroenterostomy in each half of the stomach, the implanted loops uniting as they entered the intestine below The second session was devoted mainly to operative treatment of pulmonary affections A number of surgeons described favorable experiences with surgery of the lungs, some spoke of experimental research with the Sauerbruch under pressure cabinet Lenhartz reported 85 cases of gangrene of the lung in which he had operated In 53 cases the patients were cured, as also in 4 out of 5 cases of abscess In 26 cases of carcinoma of the lung—diagnosed mainly by the presence of fat granules in the sputa—he operated in 4 instances and one of the patients is clinically cured for the time being Körte stated that he had lost 3 patients in collapse in operating on the lungs Garré recommends displacement of the lung and pneumolysis to allow the lung to retract and bronchiectasia to subside The speakers did not seem to consider the Sauerbruch air cabinet indispensable for operating on the lungs Küttner and Wendel attempted to operate on the esophagus under over pressure but both patients succumbed Kümmell reported 4 deaths in 19 prostatectomies and Völkers a mortality of 9 7 per cent in 32 perineal prostatectomies and 2 deaths in 7 transvesical operations Rumpel called attention to the psychic disturbances some

times observed after removal of the entire prostate, in many cases leading to suicide For these reasons Rovsing avoids prostatectomy whenever possible, and prefers cystostomy with a special catheter left permanently in place The discussion seemed to show that the transvesical route is coming to be regarded as the easiest and least dangerous Rovsing reported successful removal of the entire bladder with implantation of the ureters in the groin with receptacles worn to collect the urine, which have proved very satisfactory Jacoby exhibited a stereoscope with which the interior of the bladder can be inspected Hoffmann described what he calls "suprahyoid pharyngotomy," a transverse incision for access to a tumor in the nasopharynx Haberer reported implantation of kidney tissue, but without definite results Bockenheimer stated that he has noticed that wounds infected with tetanus did not lead to tetanus if they were treated with a salve and Peruvian balsam He advocates, therefore, the application of antitetanus serum directly to the wound in the form of a salve Our German and French exchanges for April contain more or less detailed accounts of the congress and of the orthopedic and Roentgen congresses just preceding They mention the presence of Dr Keen as guest of honor The official transactions of the surgical congress are published in a special issue of the *Centrbl f Chirurgie*, generally in July

Pharmacology

ANASARCIN AND ANEDEMIN

Reports of the Council on Pharmacy and Chemistry and Comments Thereon

The following reports were submitted to the Council by the subcommittee to which these articles were assigned

ANASARCIN

To the Council on Pharmacy and Chemistry —Your subcommittee to whom Anasarcin (Anasarcin Chemical Co, Winchester, Tenn) was assigned, herewith submits its report

This remedy is offered in two forms "Anasarcin Tablets," a pretended combination of the active principles of oxydendron arboreum sambucus canadensis, and urginea scilla, and "Anasarcin Elixir," said to contain the active principles of oxydendron, sambucus, hepatica and potassium nitrate The advertisements of these articles conflict with the rules of the Council as follows

With Rules 1 and 2 The composition of these articles is kept secret in that the proportion of the ingredients is not furnished The statement that it contains the "active principles" is misleading, since these are for the most part unknown

With Rule 6 The description of the pharmacologic action of Anasarcin agrees practically with that of squill No material part of its effects can be attributed to the other ingredients Nevertheless the advertisement studiously cultivates the impression that Anasarcin has no relation whatever to the digitalis group in which scilla is commonly placed The claims are therefore misleading The claim of its infinite superiority to digitalis, the claims that it cures neurasthenia eliminates uric acid in rheumatism and is useful in obesity, cystitis, lumbago and eclampsia dyspepsia and asthma, and that it works wonders in exophthalmic goiter, appear exaggerated or false

The recommendation of its indiscriminate use in nephritis for lowering the blood pressure and the statement (contradicted in the firm's own literature) that it is not depressing are actually dangerous

It is recommended that the articles be refused recognition and that the report with explanations, be published

ANEDEMIN

To the Council —Your subcommittee to whom Anedemin (Anedemin Chemical Co Winchester, Tenn) was assigned herewith submits its report

Anedemin is an evident imitation of Anasarcin It is marketed as tablets said to contain the isolated active principle of strophanthus apocynum squill and sambucus—chemically combined The quantities are not stated The therapeutic claims are copied almost literally from the Anasarcin circulars and are equally false Anedemin, therefore, conflicts with Rules 1, 5 6 and 7

It is recommended that this report be published with comments

The reports were adopted by the Council and are herewith published

W A Puckner Secretary

REMARKS ON ANASARCIN AND ANEDEMIN

ANASARCIN

This wonderful remedy, Anasarcin, has already been exposed in these columns (vol xlvi, p 288), but it deserves additional mention, as it teaches several important lessons of general application. It is a typical example of the revival, under a new name and a thin disguise, of an old, time-worn article, squill, the use of which in dropsy has been practically discarded, presumably because experience has demonstrated its general inferiority to other drugs Anasarcin further illustrates the dangers involved in the use of semi secret nostrums It also shows how a short experience with a widely advertised but little understood drug is apt to lead to conclusions which more extensive experience demonstrates to be entirely fallacious

The first lesson is, that formulas are not always what they seem A hasty glance at the formula of Anasarcin tablets, the basis of the Anasarcin dropsy cure, creates the impression that it is a non secret remedy, for it is said to represent a combination of the active principles of oxydendron sambucus and scilla As a matter of fact, it is a secret nostrum of the insidious kind A formula which omits the quantities of its potent ingredients means very little. Further than this, we do not hesitate to charge that the claimed composition is a deliberate deception The circulars emphasize the claim that Anasarcin consists of the *isolated principles*, and not of the crude drugs Now, the isolated active principles of sambucus and oxydendron are not on the market, for the good and sufficient reason that no active principles have ever been isolated Are we to believe that the Anasarcin Company has surpassed the accredited chemists and has discovered such principles and is isolating them? We shall have more to say on this subject presently but any one in the least familiar with the difficulties attending the isolation of organic principles knows such an idea to be preposterous Indeed, it is absolutely incompatible with the exhibition of ignorance of the elementary facts of pharmaceutical chemistry which is given by these people when they call the active principles of digitalis and squill "alkaloids"

It is an axiom that the effects of a mixture can only be understood if the actions of its components are known So far as we know, the physiologic effects of oxydendron and sambucus have never been scientifically investigated for the simple reason that they are too slight and indefinite to promise results Both are credited with some slight obscure diuretic action Oxydendron, the sour wood or sorrel tree, is a small tree of the heath family, the acid leaves of which are said to be chewed by hunters for their pleasant taste and for the relief of thirst Sambucus is the common elder It is most unlikely that these two innocuous substances should play any part in the claimed powerful effect of Anasarcin, they are evidently put in the formula we do not say in the preparation to obscure the fact that Anasarcin is composed principally of squill That this is so can be gathered unmistakably from a study of the pharmacologic action of Anasarcin as described by its promoters

Acting primarily on the heart and arterial systems through the nerve ganglia a natural physiologic balance is established between the arterial and venous systems whereby effusions are eliminated Coincident with this action there is a marked worthy *slowing* of the pulse If the remedy is pushed pulse may be brought down to 20 or 30 beats per minute Its physiological action is to stimulate the cardiac motor ganglia through the cardiac plexus of the sympathetic system and at the same time exert an inhibitory influence upon the cardiac fibers of the pneumogastric thereby dilating the arteries allowing the heart's action and increasing the force of the system The prolonged diastole allows the ventricle time to completely fill and the more forcible contraction causes the mitral valve to close more thoroughly and at the same time increases pressure in the coronary arteries serving thereby the double purpose of relieving congestion and increasing heart nutrition

Anasarcin will [illegible]

To appreciate fully the meaning of this description of the actions of Anasarcin, it should be compared with the effects of the digitalis group, to which squill belongs The following account is quoted literally from a recent Text Book of Pharmacology (Sollmann)

The phenomena of the therapeutic stage of digitalis action are said to be

1 Slowing of the heart with systole and diastole both lengthened

2 Increased strength of beat, leading to greater efficiency of the individual contractions and to an increase in the total efficiency

3 A tendency to the systolic phase.

4 A rise of blood pressure due mainly to the increased action of the heart but partly also to a vasoconstriction

Abnormal dilation of the heart is lessened and irregularities tend to disappear

The therapeutic effects are explained, in part, as follows

A larger amount of blood will be thrown into the aorta and coronary circulation The first effect will be an improved condition of the heart The tonic action narrows the ring of the valves brings them closer together narrows the orifice The venous congestion will tend to be relieved This relief will fall in the first place on the lungs The lowering of the venous pressure will tend to cause absorption of the effusions

The nauseant action of squill, which is alluded to in connection with Anasarcin, is too well known to require more than a mention

In brief, then, it appears from the statements of the Anasarcin Company that the action of the remedy is that of squill and that the other ingredients are a mere blind It is, of course, well known that squill can be used as a substitute for digitalis in cardiac dropsy, although it is generally considered very inferior to the latter drug Rose Bradford, for instance states "Squill is not used to any extent in the treatment of cardiac disease and cardiac dropsy, digitalis being a far more efficient and less toxic substance" However, it has been frequently observed that digitalis occasionally fails, and it may then be replaced successfully by another member of the group At all events, it is very likely that squill is a fairly efficient substitute for digitalis, especially when it is supplemented by a very free course of Epsom salts and by potassium nitrate (the active ingredient of Anasarcin Elixir), both of which are stated to be essential adjuvants to the Anasarcin (or squill) tablets There can be no objection to the use of squill when it is indicated, but any one who wishes to use it should do so with his eyes open, knowing what substance he is using and how much (which he does not in Anasarcin), knowing also that it has the same indications and limitations as digitalis He should not be misled by such statements as the following

"Does what dropsy medicaments have hitherto failed to accomplish"

"Superior to digitalis, strophanthus scoparius, squills, acetate of potash and the hydragogue cathartics all put together"

"The only known relief" (how modest!) "and permanent cure of dropsies"

"Unrivaled heart tonic" "The most powerful agent known"

Any one wishing to use squill should take the trouble to acquaint himself with the results obtained by competent and independent observers, and not rely on it in eclampsia, septicemia, "vices of civilization," all forms of neurasthenia, as "an active eliminator of uric acid in rheumatism," in hepatic cirrhosis dyspepsia, asthma, obesity, cystitis (!), lumbago, exophthalmic goiter, etc.

He should also learn the contraindications to the use of squill, deducible from the fact that it causes vasoconstriction and raises the blood pressure (prohibiting its use in Bright's disease and arteriosclerosis), and that it produces marked gastric irritation, consequently nausea and depression, that it is a very toxic agent, and that the dangers of cumulative action must be borne in mind In respect to these the advertisements of the Anasarcin people are little short of criminal, for these state

"Safe in administration" 'Non toxic as ordinarily administered" "Will nauseate some persons," but "the reaction from the temporary depression is prompt." "In Bright's disease, both the interstitial and parenchymatous forms of nephritis acute or chronic no remedy to equal it in efficacy" 'Without increasing the debility of the patient or interfering with nutrition by producing loss of appetite" "This treatment is to be continued without cessation until all symptoms of dropsy have disapppeared"

Physicians who are inclined to disregard this warning, and who follow the advice of the Anasarcin people, should remember that their patients—or their friends—will put the blame for the results, which are bound to follow sooner or later, on the prescribers, and not on the deceptive advertisements of the Anasarcin Chemical Company

There is another little matter which throws an illuminating side light on the Anasarcin Company They take every occasion to say that Anasarcin is "not offered to the laity," "never sold to the laity," etc., but witness the following, which was found in the *Retail Druggist* of May, 1906, p 179 The italics are ours

CURE FOR DROPSY

As every druggist knows dropsy has been one of the incurable diseases when caused either from heart liver or kidney trouble. *A pharmacist* in Winchester Tenn *has worked out a remedy* called Anasarcin which he is exploiting to the physicians and his remedy is showing itself as possessing great merit. Several hopeless cases have been treated as a last resort by Anasarcin and in a very short time the patient has shown marked improvement and has effected permanent cures

The result of the cases as handled by the physician with the aid of Anasarcin has been so easily and quickly cured that physicians of Tennessee and the southern states are high in their praises of the remedy The company which now manufactures and sells it is known as the Anasarcin Chemical Co of Winchester Tenn *Any druggist who knows of a case of dropsy would be conferring a favor on the patient and mankind in general by telling the party* or his physician *of the southern pharmacist* and we have no doubt but what a prompt relief and permanent cure would be affected [Probably means effected—Ed]

(*To be continued*)

Correspondence

The German Surgical Congress

Berlin, April 6, 1907

To the Editor —The thirty sixth annual meeting of the German Surgical Society has just come to an end It has occurred to me that it might be of interest to some of your readers to learn something of its management. In many respects it is a decided improvement on the conduct of similar meetings with us, and we would do well to imitate them Of the scientific proceedings I shall say nothing, as these you will get from others

The society has over 1,600 members and 76 new ones were added this year It is, therefore, the largest, and I think it is fair to say also the most important surgical society in the world Over 800 were in attendance The meetings are always held in Easter week in the Langenbeckhaus, in Berlin As the hall seats only 500 to 600, cards of admission have to be shown Even the aisles were well filled Strangers are admitted to a rather narrow gallery on three sides of the hall

The arrangement of the hall is excellent. It is nearly square the seats rising abruptly as in an amphitheater, so that all can see and hear well It is lighted wholly by a large sky light, and by electricity at night The president, flanked by the other officers, sits on a long, raised platform and back of him is a higher platform or "tribune" to which each speaker ascends Back of the speaker is a blackboard with a wainscoted wall on each side on which charts, pictures, etc., were fastened by the thumb tacks used by artists Above this wainscoting and on the side walls were hung a number of portraits In the middle was Langenbeck and, as if to show that surgery includes pathology and the surgical specialties, v Graefe's portrait hung on his right and Virchow's on his left Among the others were Billroth, Czerny, v Esmarch, Thiersch and other Germans, while Lister, Paget, Spencer Wells and Ollier represented the international character of our science von Bergmann's portrait was appropriately draped in crêpe The sorrow for his so recent death was universally expressed and during the president's address, when he had spoken of their loss, the entire audience rose for a moment to express their homage and respect. Few men have wielded a wider influence especially by his charming personality and his handsome presence It would be hard to find four finer looking men than Langenbeck, Bergmann, Esmarch and Czerny

The congress lasts four days instead of three, as is usual with us, and the hall was as full on the last day as on the first It is a series of serious meetings, with surgery as the important business to be transacted. They meet from 9 to 1 and 2 to 4, beginning and ending promptly No time is lost at lunch, as this is served in the lobby at a most reasonable price No social functions interfere with the scientific business of the day Only in the evening are there any dinners Attention to the business of the meeting is essential, for though the rule of the society allows only 70 papers, there were 100 on the program this year, and in addition to these there were a few discussions No wonder that so portly a volume of Transactions is issued every year There were some unavoidable absentees, and so probably only 80 to 85 papers were actually presented Moreover, only a few of these were read, and those not usually *in extenso* Fifteen minutes is the time allowed for papers and five for demonstrations and discussions, though the rule was not very strictly adhered to If a speaker was dull and uninteresting (of which there were only four or five, I think) the audience did not hesitate to give him notice to stop by slight but very perceptible shuffling and stamping of feet There was no applause, not even at the end of the president's address The only expressions of approval were half murmured "bravos" on a few occasions

Not only was the blackboard freely used, but there were generally drawings, models, specimens, photographs, skiagraphs and many patients shown, which added greatly to the interest and the comprehension of the audience While not a few of the papers were by younger men, yet the German deference to age, distinction and official position was much in evidence The "Ausschuss" members make up a sort of large Executive Committee, who transact most of the business They are generally among the older and more distinguished men They are admitted by a separate door and occupy the front seats, and are prominent in the proceedings

Even the treasurer's report was brief and a still shorter summary was placed on the blackboard for every one to see

Readers of papers generally read only abstracts, but publish the papers in full Most of them instead of reading gave *extempore* the substance of their communications The speaking even in debate, was excellent, rarely with hesitation or halting and the German was fluent and well pronounced The few who read from manuscript generally made the mistake so common with us, of reading very closely A reader should know his manuscript so well that for at least two thirds or even four fifths of the time he can look into the eyes of his audience Only so can he hold their strict attention A close and especially a droning reader puts them to sleep

There were few discussions but these were admirable Those who took part were well chosen and had evidently prepared themselves They added something to the subject discussed *Per contra* there was very little spontaneous debate that is debate properly so called, little of quick expert fencing few sparks from the clashing of firm but differing views little of that ready repartee which is often seen with us Most of the papers were not even submitted for discussion When one was held it was generally on a group of allied papers Indeed, there was no time for more

Professor Riedel of Jena was an admirable presiding officer, with a clear voice, clean cut enunciation and a fund of humor which lightened most agreeably the sometimes over serious proceedings Never was an audience more responsive They 'caught on' instantly

Professor Riedel is succeeded by v Eiselsberg of Vienna, a most excellent choice

In one respect we certainly should institute a reform—our long drawn out dinners Rarely do we get away till 12 or 1 o'clock and I am sure that no one who was present at the British Medical Association dinner at Montreal in 1897 will forget his weary wending to his hotel toward 3 a m Here the single official social function was the dinner on Thursday evening The invitation named 5 30 p m as the hour We sat down at 6 The dinner consisted of only six courses, besides cheese, fruit and coffee The speeches began after the first course, and while they were being made the waiters waited. Professor Riedel, of course gave as the first toast "The Kaiser" He was followed by König Küster Czerny, v Eiselsberg and Rovsing of Copenhagen The president introduced no one Each rose, apparently spontaneously called attention by klinking his glass, spoke for three to five minutes, and after the three "Hochs," the next course was served By 8 30 we broke up into little groups, and many went home, and by 9 o'clock—when we would be only at the beginning—nearly everybody had gone One private dinner was at 5 30, the others at 6 30 p m If I can persuade American medical men to adopt such a sensible procedure I shall not have written in vain I can not see that there is any real obstacle to prevent such a genuine and welcome reform

Most of the leading men were here In addition to those I have mentioned there were Rehn Lauenstein, Helferich, Gluck, Garre, Lenhart, Körte, Bardenheuer Kümmell Rydygier, Kausch, Krause Mr Arthur E Barker of London, and many others Unfortunately, Trendelenburg Kocher Bier and some others were unable to come

The relic of medieval barbarism, the deformities resulting from scars received in student duels, I thought less in evidence than in former visits to Germany Such scars only make handsome men ugly and ugly men *noch hässlicher* In a country so highly developed intellectually, it is a marvel that such a custom can persist at all If my observation is correct, it would seem that it is dying out—a consummation devoutly to be wished Whether I am right in this or not, I am surely right when I say that nowhere will an American surgeon receive a heartier welcome than from his German colleagues, and nowhere will he be apt to learn more

W W Kiln

P S—Just as I finished this letter Dr James H Honan called to invite me to a meeting of the "Anglo American Medical Association," which was founded by him and of which he is still president Its headquarters are in Rothacker's Buchhandlung, 105 B Friedrichstrasse Every Saturday night they dine at 7 30 in Room No 1 Heidelberg Restaurant in the same building as the Central Hotel, opposite the Friedrichstrasse station and only five minutes' walk from the Langenbeckhaus At 8 30 they have a lecture or informal talk by a German professor or docent This evening's lecture was by Schleich—him of the 'fluid"—and was excellent The association numbers usually from sixty to eighty The entrance fee is only $1 They are doing an admirable work in helping American students in selecting their courses of study and giving information and help in every possible way A similar Anglo American club exists in Vienna with its headquarters at the Café Polyklinik, opposite the Allgemeines Krankenhaus

Not only should every American student in these cities join these clubs but the older men should visit them and encourage our younger hard working colleagues If I may judge by my experience to night such visits are most highly appreciated W W K

Miscellany

The "Lancet" on the Work of the Council on Pharmacy and Chemistry

Under the caption "The American Medical [illegible] Proprietary Remedies," the *Lancet* (April 20 [illegible] to say

The Council on Pharmacy and Chemistry [illegible] Medical Association is making excellent [illegible] paign for the reform of the trade in [illegible] For over two years a board of experts [illegible] collecting information [illegible] the United States [illegible] ply with a certain [illegible]

The Association has just issued two publications which indicate the results of this investigation up to the present time One of these booklets contains monographs on a number of unofficial and proprietary drugs tentatively approved by the Council on Pharmacy and Chemistry This is to form the basis of a volume to be called "New and Non official Remedies" The other booklet contains a number of reports by committees and analysts on proprietary medicines to which recognition in that volume is to be refused No article advertised to the public is accepted for inclusion in "New and Non Official Remedies," nor is a recommendation for the treatment of any particular disease permitted on the label or on an accompanying circular A false statement by the manufacturer as to the origin, source, or therapeutic value of this drug prevents recognition, and the Council insists that in the case of every compound the names and proportions of all active medicinal ingredients and of alcohol, together with the identity of any preservative used, shall be honestly disclosed In the case of chemical substances, structural formulas are also required The manufacturer's statements are checked when necessary by analysis in the laboratory If the trade name of an article be insufficiently descriptive the Council reserves the right to include in "New and Non Official Remedies" a descriptive title as well as the trade name The Council is careful to state that even when all these conditions have been duly complied with, acceptance does not connote a recommendation but merely implies that so far as is known the fixed ethical standard has been reached. The monographs in the booklet thus tentatively approved follow to some extent the model set by pharmacopeias As nearly all the remedies included are the subject of proprietary rights, the trade name—whether this be registered trade mark or not—forms the title of each monograph, a fact which will greatly benefit firms owning any kind of proprietary interest in the names of remedies Following this are synonyms, then the description of the remedy, its method of preparation, distinctive characters and tests, actions and uses, and dosage Finally, the name of the manufacturer and the nature of his rights, whether arising through a patent or a trade mark, are given

The second of the two booklets issued by the American Medical Association contains, as has been stated, reports on certain proprietary articles which do not reach the ethical standard laid down by the Council on Pharmacy and Chemistry Sometimes the report consists merely of quotations from advertising literature, the language of which is itself sufficient to explain to the medical profession why the articles referred to have not been acceptable In one or two cases letters from irate manufacturers objecting to give away their trade secrets are printed Analytical reports show that proprietary brands of "metabolized cod liver oil" and "cod liver oil cordial" contain no cod liver oil at all A preparation freely advertised both in the United States and in Great Britain as a "laxative salt of lithium" was found to consist almost wholly of sodium citrate and sodium sulphate A number of proprietary powders and tablets were found to contain so large a proportion of acetanilid as to disentitle them to the recognition of the Association A proprietary "coca wine" emerges unsuccessfully from the ordeal of analysis accompanied by a scrutiny of the advertisements of the wine The committee believes that this wine is intended primarily to be a beverage, not a medicine For one reason or another a considerable number of substances have been weighed in the balance and found wanting

This authoritative separation of proprietary remedies into two distinct classes is a notable step in advance of previous attempts to deal with a growing difficulty and a grave evil Many proprietary compounds and so called synthetic drugs are articles which ought not to be prescribed by medical practitioners in any circumstances The difficulty has been that the medical profession has had no satisfactory means of distinguishing between the worthless and the useful For it is undoubtedly true that some remedies which are the subject of proprietary rights are valuable and almost necessary additions to the therapeutic agents at the service of physicians However much we may object to the principle of private monopolies in things which are a public necessity, it would be too much to expect that a manufacturer who spends large sums of money on chemical and clinical research should dedicate to his trade competitors the advantages of the genuine discoveries of his employes The American Medical Association has recognized this at the onset and has begun its work with conspicuous wisdom For the future it contemplates the formation of a corps of medical consultants connected with large hospitals and also the establishment of a chemical and pharmaceutical laboratory in the Association's premises Many more substances still have to be investigated, but from the work which has already been accomplished it may fairly be anticipated that the publication of "New and Non Official Remedies" when completed will serve a most useful purpose There will then no longer be any excuse for the prescribing by medical practitioners of discreditable proprietary medicines, or for the acceptance by newspaper proprietors of fraudulent advertisements in respect of such nostrums If medical men, pharmaceutical chemists and druggists are willing to take active steps to educate public opinion in the matter of quack medicines, educative material in plenty will be supplied by the American Medical Association, whose action will only need their energetic support in order to confer a conspicuous benefit on the body politic

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Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION ETC

"What Fools These Doctors Be"

In the April number of the *Memphis Medical Monthly* appears an article with the above title by Dr Buford of Memphis The arguments he uses to establish the truth of his statement are many The paper is too long to quote in full, but some of Dr Buford's remarks are entitled to reproduction He says "Physicians are not diplomats, but they do more for the advancement and welfare of mankind than do all the statesmen combined They are poor, yet they do more charity than all the philanthropists put together They are not over religious, but they practice more Christianity than do the clergy They are not over virtuous, but they are the custodians, often, of a woman's purity, and too often of her good name They are the public servants, yet they carry more secrets in their innermost souls than ever were confessed to priests The average doctor's influence is great in his community, yet he is the tool of every demagogue and politician"

As to the manner in which the profession has been duped by the proprietary medicine manufacturer, Dr Buford, as might be expected, has very positive ideas He says "We are especially used by proprietary medicine men, and, like the patient ass, we meekly submit to their burdens and only occasionally kick when we are prodded too deep They approach us with samples and bait us until we begin to prescribe their products, without knowing what they contain, and most of us don't care so long as they are palatable, give results and have names which are easy to write"

Dr Buford carefully sets forth the way in which physicians are victimized by professional dead beats He says "If you fail to meet your obligation at the bank promptly, this becomes known to every banker in the city, and when you again stand in need of money, the banker will tell you that he is sorry, but he has no funds to loan But when the patient who has worked Dr S as long as he can, rings up Dr B and tells him to come right up to his house, Dr B goes in all haste to see him and gives him his best efforts and is fed on promises as long as they will last, after which the patient sends for Dr J There are enough doctors in Memphis for him to have a new one every week or so for several years"

His conclusions are that physicians themselves are responsible for most of the charges in the indictment and that, if it is true that doctors are fools, they have no one to blame but themselves

Contract Practice and Township Trustees

Dr Albert S Barnes, Botkins, Ohio, sends the following discussion

"In view of the prevailing interest more recently manifested in our profession's material welfare, I take pleasure in reporting the following resolutions, which are self explanatory Under date of Jan 29, 1907, these resolutions were signed by the seven physicians residing in the township It is to be hoped that similar concerted action of the members of our profession throughout the country may hasten the day' when we shall state our terms to all corporations, private and public, with the same freedom that we do to our ordinary patients When this shall have been accomplished, we shall be justly entitled to, and may hope to receive, due consideration"

Whereas The trustees of Dinsmore Township Shelby County Ohio have objected to paying regular fees for medical services rendered to paupers and have announced their intentions to advertise for the lowest bidders for this work be it

Resolved That we the physicians of the said township whose names are hereunto annexed disapprove this action of the trustees for the reasons among others that such action would, in many cases curtail the liberty of the patient in his choice of a physician and so cannot subserve the best interests of the patient in his betterment or recovery and that such proposed action of the trustees would if concurred in by us contravene the Principles of Medical Ethics of the medical fraternity and be it further

Resolved That we will not individually nor collectively bid in the township work but that we will present bills for payment at the regular fees of the Shelby County Medical Society for any work done for the township s paupers

"For the benefit of those who doubt the possibility of such action among the physicians of his own neighborhood, it may be proper to add that only three of the seven signing these resolutions are members of the county society, and that no greater harmony prevails here than in other sections But we hope this action may be a step toward greater harmony and increased membership in the society, with all the professional betterment thus attainable Surely an enlightened profession with as great demands for money as assail present day physicians should be able to agree at least in the one point of fairly adequate 'pecuniary acknowledgment' from their patients"

New York Law Not Responsible

In a recent letter a correspondent states that several life insurance companies are circulating the report that all companies having home offices in New York state are provented by the new insurance law recently adopted in that state from paying more than $3 for medical examinations for policies under $3,000, and that the responsibility for the reduction in life insurance examination fees rests with the New York legislature and not with the officers of the companies This matter has already been discussed in The Journal, Dec 8, 1906 but, as the statement is still being made by insurance promoters, we take this opportunity to call attention to the misleading nature of this claim The New York law does not limit the amount paid for medical examinations Several of the larger companies reduced their fees long before the New York law was passed

Education in Sexual Hygiene

The Ottawa County (Mich) Medical Society held a public meeting on April 11 for men, particularly college and high school students and young men just entering business life The topic was the prevalence of diseases incurred through immorality and the best methods for their prevention The physician's side of the case was given by Dr H Kremers, whose paper was discussed by Dr T J Huizinga Local clergymen prominent lawyers of the town, the president of the local college and the county and town superintendents of schools all took part in the discussion The meeting was well attended, and it is felt that much good resulted The secretary of the society reports that the meeting is largely the result of the visit of Dr McCormack to Ottawa last October

Non Repetatur

In harmony with the local druggists association the Summit County (Ohio) Medical Society has taken action to prevent the refilling of prescriptions issued by its members without an order from the prescribing physician A statement of the action of the society and an explanation of the reasons therefor and the relation to the health and well being of the public were published in a local paper

McCormack in Iowa

Reports received from Iowa, in which Dr McCormack has spent the greater part of April, indicate that the meetings held in that state have been unequaled in interest and attendance The engagements had been well advertised and thoroughly worked up among the physicians and the public The newspapers, almost without exception, showed great interest in the work, printing lengthy notices and announcements of the meeting in advance and long reports of the lecture after the meeting Details regarding the Iowa meetings will appear later

Queries and Minor Notes

Anonymous communications will not be noticed Queries for this column must be accompanied by the writer s name and address but the request of the writer not to publish name or address will be faithfully observed

LITERATURE ON OPSONIC THERAPY

Menominee Mich April 17 1907

To the Editor —Can you furnish me with a list of articles on the opsonic index and opsonins? H A Vennema

Answer —As others have asked similar questions we give a list of recent literature The following articles on the opsonic theory have appeared in The Journal A M A during the last few months

Phagocytosis and Opsonins L Heltoen Chicago The Journal May 12 1906 p 1407

Abstract of Sir Almroth E Wright s address at the Boston Medical Library meeting Nov 3 1906 p 1905

The Opsonic Index in Medicine N B Potter N F Ditman and F B Bradley New York City Nov 24 and Dec 1 1906

The Opsonic Index in Typhoid Fever C P Clark Chicago Dec 29 1906 p 2159

A Series of Medical and Surgical Affections Treated by Artificial Autoinoculation A I Ohlmacher Feb 16 1907 p 571

Study of the Opsonins F A Knorr Baltimore April 13 1907 p 1255

A Convenient Method of Obtaining Clump Free Emulsion for Opsonic Work J F Pottenger Monrovia Cal April 13 1907

The Percentage Index Versus the Bacillary Index in the Estimation of the Opsonins C J Simon Baltimore Jan 12 1907 p 139

The following articles have appeared in American British and Canadian journals as indicated

The Opsonic Theory and Its Practical Application to Medicine and Surgery C W Ross *Brit Med Jour* London July 7 1906 abstracted in The Journal A M A Aug 4 1906 p 390

Observations on the Opsonic Index and the Antipneumococcal Power of the Blood in Pneumonia H F Wolf Chicago *Jour Infect Dis* October 1906 abstracted in The Journal A M A Nov 24 1906 p 1766

Opsonic Index of Tuberculous Patients Undergoing Sanatorium Treatment C A Craig Calvert *Brit Med Jour* July 7 1906 abstracted in The Journal A M A Aug 4 1906 p 391

Vaccine Therapy and Passive Hyperemia in Surgery J C Hollister Chicago *Surgery Gynecology and Obstetrics* Dec 1 1906

Wright s Dates Opsonins and Bacterial Vaccine Work C B Weld Colorado Springs *Colorado Medicine* January 1907 abstracted in The Journal A M A Feb 16 1907 p 647

Opsonins and Their Utility in Practical Medicine H French *Brit Med Jour* Feb 2 1907 abstracted in The Journal A M A March 2 1907 p 806

Value of Tuberculo Opsonic Index in the Diagnosis of Strictly Localized Tuberculosis W J M Kellogg Seattle Wash *Northwest Medicine* Seattle January 1907 abstracted in The Journal A M A Feb 23 1907 p [illegible]

Study of Opsonins [illegible] Bitsham *Jour* [illegible] abstracted in The Journal [illegible]

The Opsonic Theory Sir A E Wright, London, *Canadian Practitioner* November, 1906

A Clinician s Observations of Opsonic Therapy, C. D Aaron Detroit *N Y Med Jour* Dec. 1 1906

Note on the Opsonic Index, B Brooke *Dublin Jour Med Sci* September 1906

Opsonic Factors Their Estimation and Use in Therapeutics R E French *Practitioner* London July 1906

Effect of Bodily Exertion on the Opsonic Index of Healthy Persons. G C Elliett, *Brit Med Jour* July 21 1906

Opsonins and the Opsonic Index and Their Practical Value in Treatment of Disease, G A Crace-Calvert, *Lancet* London, Feb 2, 1907

The Opsonic Index as a Guide for Therapeutic Inoculation with Some Results of Treatment by Vaccines T P Dunhill *Intercolonial Med Jour of Australia,* Melbourne, November 1906

Combining Properties of Opsonins and Normal Serums R. Muir and W B M. Martin, *Brit Med Jour* London Dec. 22 1906

The Opsonins in Surgery J G Mumford Boston *Boston Med and Surg Jour* March 28 1907

Opsonins and Bacterial Vaccines G W Ross Toronto Ont *Canada Lancet* Toronto, January 1907

Opsonins and Immunity J L Bunch, *Lancet* London, March 1907

Directions for Determining the Opsonic Index of Blood, E C L Miller Detroit *Therapeutic Gazette* Detroit March 1907

Value of Tuberculo-Opsonic Index in Diagnosis E T Fraser *Glasgow Med Jour* March 1907

Review of Opsonins and Bacterial Vaccines E M Houghton, Detroit, *Therapeutic Gazette* Detroit January 1907

Opsonins and Treatment of Bacterial Vaccines J L Bunch *Lancet* London Jan 19 1907

Newer Facts Concerning Phagocytosis the Opsonins L. W Famulener Bloomington Ind *Central States Med Monitor* Indianapolis January 1907

Opsonins, E B Bradley New York City, *Physician and Surgeon* Detroit December 1906

WHAT IS CRYOSCOPY?

WASHINGTON D C April 26 1907

To the Editor —In THE JOURNAL April 20 1907 on page 1349 second column and second line of last paragraph appears the word cryoscopy I am unable to find this word in either of my three dictionaries and would appreciate an explanation of the meaning of the word C C A

ANSWER —The word cryoscopy comes from the Greek *kryos* cold frost and *skopeo* to see As used in physics it means the determination of the freezing point of a liquid In medicine it has reference to the process of comparing the freezing point of blood urine liquor amnii effusions etc. with that of distilled water Cryoscopy of the blood is of value in determining the functional activity of the kidneys Cryoscopy of the urine is of comparatively little value in fact Sahli believes that the freezing point of a urine free from sugar and proteid may be estimated by multiplying the last two figures of the specific gravity carried to the third decimal place by 075 C Its value is based on the principle that the freezing point of any liquid depends on the kind and amount of solids held in solution by that liquid The lower the freezing point the greater the concentration Definitions of this term are found in Gould s Appleton s and Dorland s medical dictionaries and in the Standard dictionary and it has been frequently mentioned in THE JOURNAL during the last four or five years as will be seen by referring to the index of the various volumes Determination of the lowering of the freezing point of the urine in case of suspected kidney disease is now among the routine functional tests in some clinics and hospitals abroad Some consider it important in determining the functional capacity of the other kidney in contemplating nephrectomy The technic of cryoscopy was mentioned in THE JOURNAL June 4 1904 page 1518 and was described again May 26 1906 page 1654 with accumulating evidence as to its diagnostic value

TREATMENT OF EARACHE

CHICAGO April 25 1907

To the Editor —If Dr Young (THE JOURNAL April 20 page 1368) will use the following prescription for his patients with earache he will certainly relieve the sufferers

℞	Phenol (acidi carbolici)	m x	65
	Chloralii hydrati		
	Camphorae āā	gr x	65
	Olei ricini q s ad	ʒ iv 15	

M Heat the mixture and fill the ear with it and then cover the ear with a hot damp cloth I have used this prescription for seven years with perfectly satisfactory results J P PICKARD

The Public Service

Army Changes

Memorandum of Changes of Stations and Duties of Medical Officers U S Army, week ending April 27, 1907

Lyster W J L asst surgeon will proceed from Fort McIntosh Texas to Fort Sam Houston Texas for temporary duty

Rhoads T L asst. surgeon granted leave of absence for one month effective about May 1 1907

Sweazey V E asst surgeon granted 30 days leave of absence effective about May 20, 1907

Heard G P asst surgeon, will proceed from Fort Wingate N M to Fort Huachuca Arizona for duty as member of board of officers to examine candidates for admission to U S Military Academy

O Connor R P asst surgeon will proceed from Fort Leavenworth Kan, April 29, 1907, to Fort Crook Neb for temporary duty

Byrne C B asst surgeon general relieved from duty in the Philippines Division to take effect at such time as will enable him to comply with this order and will proceed on transport to sail from Manila about July 15 1907 to San Francisco Cal and on arrival report by telegraph to the Adjutant General of the Army for further orders

The following named medical officers are relieved from duty at the posts designated after their respective names to take effect at such time as will enable them to comply with this order and will proceed at the proper time to San Francisco Cal and take transport to sail from that place about June 5, 1907 for the Philippine Islands and on arrival at Manila will report in person to the Commanding General Philippines Division for assignment to duty

Wyeth M C surgeon, Fort Wadsworth N Y
Snyder H D surgeon Fort Sam Houston Texas
Smith A M surgeon Fort Douglas Utah
Fuller L A asst surgeon U S Military Prison Fort Leavenworth Kan
Skinner G A asst surgeon Fort William Henry Harrison Montana
Robbins C P asst surgeon Fort Ethan Allen Vermont
Rhoads T L asst surgeon Fort Crook Neb
Wilson J S asst surgeon Fort Oglethorpe Ga to accompany the 26th Infantry from Fort Sam Houston Texas
Edger B J Jr asst. surgeon Fort Reno Okla to accompany the 26th Infantry from Fort Sam Houston Texas
Lyster W J L asst surgeon Fort McIntosh Texas to accompany the 26th Infantry from Fort Sam Houston Texas
Reno W W asst surgeon Fort Riley Kan to accompany the 10th Cavalry from Fort Robinson Neb

Ives F J surgeon relieved from duty in the Philippines Division and will proceed from Manila about June 15 1907 to San Francisco Cal thence to the Presidio of San Francisco Cal for duty at that station

Kendall W P surgeon relieved from duty in the Philippines Division and will proceed from Manila about June 15 1907 to San Francisco Cal thence to Fort Sam Houston, Texas for duty at that station

Winter F A surgeon relieved from duty in the Philippines Division and will proceed from Manila about June 15 to San Francisco thence to Fort Myer Va for duty at that station

The following named medical officers are relieved from duty in the Philippines Division to take effect at such time as will enable them to comply with this order and will proceed on the transport to sail from Manila on or about July 15 1907 to San Francisco thence to the posts designated after their respective names and report to the commanding officers thereof for duty

Shillock Paul surgeon Fort Robinson Neb
Fisher H C surgeon Fort D A. Russell Wyo
Kulp J S surgeon Fort Meade S D

Stark A N surgeon relieved from duty in the Philippines Division to take effect June 15 1907 and on expiration of his leave of absence will proceed to Vancouver Barracks, Wash for duty at that station

Yost, J D Field, P C Banta W P asst. surgeons relieved from duty in the Philippines Division and will proceed on the transport to sail from Manila about July 15 1907 to San Francisco and on arrival report by telegraph to the Adjutant General of the Army for orders

Barney C N asst surgeon will proceed to Denver for special surgical treatment and on the conclusion thereof will return to his proper station

Davidson W T asst. surgeon is detailed as a member of the Army retiring board appointed to meet at Denver by Par 12 S O 122, May 22 1906 War Department vice Captain George P Heard asst surgeon hereby relieved

Maus L M deputy surgeon general relieved from duty as chief surgeon Department of Texas and will proceed to San Francisco Cal and take transport to sail from that place July 5 1907 for the Philippine Islands and on arrival at Manila will report to the Commanding General Philippines Division for assignment to duty

Moseley F B asst. surgeon general will report in person to Brigadier General William P Hall adjutant general President of the Army Retiring Board appointed by Par 8 S O 229 Oct 9 1906 War Department at such time as he may designate for examination by the board and on completion of his examination will return to the place of receipt by him of this order

Newgarden G J surgeon retired from active service on account of disability incident thereto on April 24 1907

Shaw H A surgeon left Fort Slocum N Y with recruits en route to San Francisco Cal

Long C J dental surgeon left Fort William Henry Harrison Mont for duty at Fort Missoula Mont

McAlister John A dental surgeon left Fort Sheridan Ill for duty at Fort Wayne Mich

Halliday F A cont surgeon granted leave of absence for one month

Whitney Walter cont surgeon relieved from duty at Fort Preble Me and ordered to Fort McPherson Ga. for duty

O Day S F cont surgeon ordered from New York City to Fort Totten N Y for duty

Wren R J cont surgeon relieved from duty at Fort Totten N Y and ordered to Fort Sloçum N Y for duty

Navy Changes

Changes in the Medical Corps U S Navy for the week ending April 27 1907

F A Asserson passed asst surgeon detached from the *Columbia* when placed out of commission and ordered to the *Kansas*

J T Kennedy passed asst surgeon detached from the *Hancock* and ordered to attend course instruction at the Naval Medical School Washington D C

R C Ransdell asst. surgeon detached from the *Maine* and ordered to *Connecticut*

H A May asst. surgeon ordered to the Navy Yard Norfolk, Va

M C Baker acting asst surgeon detached from the Navy Yard Norfolk, Va and ordered to duty at the Naval Hospital at that place.

J G Field, surgeon detached from duty with Marine Recruiting party at Dallas Tex. and ordered to duty with the Marine Recruiting party at Houston Tex May 12

I L Jones asst. surgeon orders of March 20 modified ordered to the *Milwaukee*

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 24 1907

Carrington P M. surgeon detailed to represent the service at the meetings of the National Association for the Study and Prevention of Tuberculosis and the twenty fourth annual meeting of the American Climatological Association to be held in Washington D C May 6 9 1907

Lavinder C H passed asst surgeon granted leave of absence for one month from April 24 1907

Hobdy W C passed asst. surgeon directed to proceed to San Francisco Cal for special temporary duty on completion of which to rejoin station

Boggess J S, passed asst surgeon directed to proceed from St. John N B to Quebec Canada for duty in connection with the examination of alien immigrants

Bailey C W, acting asst surgeon granted leave of one day April 23 1907

Bullard J T acting asst. surgeon granted leave of absence for nine days from March 28 1907 account sickness

Foster S B acting asst surgeon granted six days leave of absence from April 19 1907

Keatley H W acting asst surgeon granted leave of absence for three days from April 16 1907 under Paragraph 210 of the Regulations

Onuf B acting asst. surgeon granted leave of absence for two days from April 10 1907 account sickness

Schwartz Louis acting asst surgeon granted leave of absence for four days from April 7 1907 account sickness

Schug F J acting asst surgeon granted leave of absence for fifteen days from May 3 1907

BOARD CONVENED

Board of medical officers convened to meet at Galveston Texas April 22 1907 for the physical examination of an officer of the revenue cutter service Detail for the board Passed Asst Surgeon C M Corput chairman Acting Asst Surgeon William H Cammon recorder

Health Reports.

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended April 26 1907

SMALLPOX—UNITED STATES

California Los Angeles March 31 April 7 1 case

District of Columbia Washington April 13-20 1 case

Florida Duval County Jacksonville April 6-13 1 case Hillsboro County Tampa and Fort Tampa April 6-20 14 cases Polk County April 6-20 8 cases Santa Rosa County April 6-20 16 cases

Illinois Chicago April 13 20 1 case Galesburg April 6 20 3 cases

Indiana Elkhart April 6-20 6 cases Indianapolis April 14 21 5 cases Lafayette April 8 15 1 case South Bend April 6 20 6 cases

Iowa Davenport April 8 15 1 case

Kentucky Louisville April 11 18 5 cases

Louisiana New Orleans April 8 20 15 cases (4 imported) 2 deaths Shreveport April 6 13 1 case

Massachusetts Chelsea April 6-20 2 cases Lawrence April 6 20 25 case

Michigan Detroit April 13 20 3 cases Saginaw April 6 20 2 cases

Minnesota Stillwater March 1 31 1 case Winona April 6-20 4 cases

Missouri St Joseph April 6 20 17 cases St Louis April 13 20 3 cases

New York New York April 6 20 2 cases 1 death

North Carolina Greensboro April 6-20 7 cases

Ohio Toledo March 26-April 20 5 cases

South Carolina Charleston March 1 31 1 case

Texas Corpus Christi April 13 2 cases Houston March 30-April 13 18 cases Laredo April 13 1 case (imported from Mexico)

Utah Ogden March 1 31 2 case

Washington Spokane April 6-13 12 cases

Wisconsin La Crosse April 6-13 1 case Milwaukee March 30-April 20 21 cases

SMALLPOX—FOREIGN

Brazil Bahia March 9-23 6 cases Para March 16-31 7 cases, 2 deaths Pernambuco Feb 15-28 55 deaths Rio de Janeiro March 10 31 5 cases 1 death

Canada Sherbrooke April 13 20 7 cases

Italy General March 28-April 4 9 cases Naples March 23 April 13 18 cases Turin March 16-31 4 cases

Luxembourg March 9-30 3 cases

Madeira Funchal March 16-April 17 10 cases 3 deaths

Mexico Aguas Calientes March 31 April 13 18 deaths Mexico City March 9 23 24 deaths Monterey April 7 14 1 death Nogales March 2 April 6 9 cases

Portugal Lisbon March 29 April 6 10 cases

Russia Moscow March 16-30 10 cases 2 deaths Odessa March 16-30 62 cases 9 deaths Riga March 23 30 3 cases St Petersburg March 16 23 3 cases Warsaw March 16-23 1 death

Siberia Vladivostok Feb 22 28 1 case 1 death

Spain Barcelona March 16-April 10 9 deaths Cadiz, March 1 31 6 deaths Cartagena March 23-30 1 death Seville March 1 31 8 deaths Valencia March 23 April 7 7 cases

Syria Damascus March 9-30 present

Switzerland Geneva March 23 30 2 cases

YELLOW FEVER

Brazil Manaos March 16-23 1 death Para March 16 31 7 cases 5 deaths Rio de Janeiro March 17 24 4 cases 4 deaths

Ecuador Guayaquil March 16-30 15 deaths

West Indies Trinidad Port of Spain March 23 April 6 7 cases 2 deaths

CHOLERA.

India Bombay March 19 26 5 deaths Calcutta March 2 16 50 deaths Madras March 19 23 12 deaths Rangoon March 9 16 25 deaths.

PLAGUE—INSULAR

Hawaii Honolulu April 19 23 1 case 4 deaths

PLAGUE—FOREIGN

Japan Formosa March 16-23 98 cases 77 deaths

Peru Callao March 9 1 case Chepen March 13 1 death Chiclayo March 7 13 8 cases 6 deaths Eten March 7 13 10 cases 5 deaths Mollendo, March 13, 1 case (imported from Arequipa) Paita March 7 13 20 cases 13 deaths San Pedro and Pacasmayo March 13 1 case 1 death Trujillo March 7 13 18 cases 11 deaths

Straits Settlements Singapore March 2 9 1 case 1 death

Russia Cronstadt March 29, 1 case at laboratory of Imperial Institute

PLAGUE—FOREIGN

Brazil Para March 16-31 5 cases 4 deaths Pernambuco Feb 4 28 3 deaths Rio de Janeiro March 10-31 9 cases 2 deaths

Chile Antofagasta March 16-23 42 cases 23 deaths Santiago Feb 23 March 2 24 deaths

China Hongkong March 2 9 1 case 1 death

Egypt Assiout Province March 23 27 5 cases, 6 deaths Girgeh Province March 23 27 3 cases 2 deaths Kenek Province March 20-27 27 cases 20 deaths

India General March 9 16 58 099 cases 49 440 deaths Bombay March 19 26 633 cases, 152 deaths Calcutta March 2 16 173 cases Rangoon March 9-16 72 deaths

Marriages

WILLIAM C LAWRENCE M D, to Miss Florence Lamke, both of Detroit April 18

HENRY B LEMERE, M.D, to Miss Louis Van Cleson both of Omaha Neb, April 6

CHARLES F RICH M D Lynn, Mass to Miss Mary Hodson, Center Ossipee, N H, recently

LEROY FLMER RAYHORN, M D to Miss Mary Frances Hudson at Richmond Va, April 17

WASHINGTON WATERS M D to Miss Elizabeth Melinda Yearley at Rockville Md, April 17

CLIFFORD CROSELIE CRUTE M D Chicago to Miss Margaret Freer of Hinsdale Ill, April 24

JAMES MARSHALL PRICE M D, to Miss Josephine Blanche Oder both of Frostburg, Md, April 17

CHARLES HENRY BEALE M D Newark Del to Miss Helen Jenness Calvert at Baltimore April 17

JOHN D MOORE M D Bloomfield N J to Miss Martha Lenahan of New Haven Conn April 20

GEORGE FRASER WILSON M D Charleston S C to Miss Anna Preston at Lexington Va April 18

JAMES ALLAN STEWART M D Plainfield N J to Miss Mary E Walker, at Baltimore April 10

JAMES P PERD M D to Mrs [illegible] Antoeau, [illegible] of [illegible] wood Mich at Newport, Mich April 19

WINSLOW C CHAMPITS M D Owatonna [illegible] Gertrude M Wolfer of Stillwater April

WILLIAM SAMUEL BELLOWS, M D, Waukegan, Ill, to Miss Isabelle Elizabeth Suess of Chicago, April 23

CARY D LANGHORNE, M.D, U S Navy, to Miss Zaidee Forsyth Gaff, at Washington, D C, April 30

SAMUEL STEVENS, M D, Kalamazoo, Mich to Miss Ruby Pearl Berger, at White Pigeon, Mich, April 16

CHARLES FOREST HENDERSON, M.D, South McAlester, I T, to Miss May West of Bloomington, Ill, March 19

WILLIAM CURTIS CAYWOOD, M D, Richmond, Ky, to Miss Daisy Frances Sipples of Lexington, Ky, July 12, 1906

ROBERT E BRATTON, M.D, Willard, Tenn, to Miss Annie D Wakefield of near Echo, Macon County, Tenn, April 17

Deaths

William Baldwin Fletcher, M.D College of Physicians and Surgeons in the City of New York, 1860, of Indianapolis, a member of the American Medical Association, formerly president of the Indianapolis Medical Society, a member of the Mississippi Valley Medical Association, who served as a scout in the early part of the Civil War, and was captured and imprisoned and later was a member of the medical corps of the Army, a member of the Indiana State Senate in 1882 and 1883, from 1883 to 1888 superintendent of the Indiana Hospital for the Insane, who established in 1888 a private sanitarium at Indianapolis for the treatment and care of the insane, known as Neuronhurst, of which he was superintendent until his death, professor and later professor emeritus of nervous and mental diseases in the Medical College of Indiana, the school of medicine of Purdue University, and eminent as an alienist and medicolegal expert, died April 25 at Orlando, Fla, from the effects of a cerebral hemorrhage, aged 69

Mads Christian Christensen, M.D University of Nebraska College of Medicine, Lincoln and Omaha, 1892, a member of the Council Bluffs (Iowa) Medical Society and Medical Society of the Missouri Valley, alderman of Council Bluffs from 1900 to 1902 and one of the most esteemed Scandinavian practitioners of Council Bluffs, died at his home in that city, April 16, from nephritis, after an illness of two weeks, aged 55

John W Talbott, M D University of Pennsylvania Department of Medicine, Philadelphia, 1861, a surgeon in the Confederate service during the Civil War, a pioneer settler of Texarkana, Texas, and a member of the Miller County Medical Society, died at the Pine Street Sanitarium, Texarkana, from shock, two hours after an operation for cancer of the tongue, February 2, aged 67

Richard F Michel, M.D Medical College of the State of South Carolina, Charleston, 1847, a member of the Medical Association of the State of Alabama and Montgomery County Medical Society, surgeon in the Confederate service during the Civil War and widely known throughout the South as a physician and scientist, died at his home in Montgomery, April 19, aged 80

Herbert Smith Olney, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1901, formerly pathologist in the hospital of the Colorado Fuel and Iron Co, Pueblo, and later a practitioner of Detroit, died at the home of his father in Fresno, Cal, April 15, from tuberculosis after an illness of nearly two years, aged 30

Christopher B Currier, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1860, one of the founders and first dean of the Homeopathic Medical College of San Francisco, and president of the State Homeopathic Society, died in the Homeopathic Hospital, San Francisco, April 16, after a long illness, aged 78

Alfred J Yost, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1893, a member of the Medical Society of the State of Pennsylvania and Lehigh County Medical Society, mayor of Allentown, coroner of Lehigh County in 1895 and 1898, died at his home in Allentown April 16, from tuberculosis, aged 36

William Wilson, M.D Bennett College of Eclectic Medicine and Surgery Chicago, 1884 a member of the American Medical Association a well known practitioner and clergyman of Coldwater Mich, died in Harper Hospital, Detroit, from abscess of the lung, April 14, after a prolonged illness, aged 84

Francis Edmonds Corbin, M D Detroit Medical College, 1870, a member of the American Medical Association, until 1896 a practitioner of northern Michigan, and since that time a resident of Los Angeles, Cal, died at his home in that city, April 15, from uremia, after an illness of two days, aged 59

Junius F Smith, M D Long Island College Hospital, Brooklyn, 1890, a member of the Connecticut State and Fairfield County medical societies, representative from Brookfield in the General Assembly, died at his home in Brookfield, April 22, from pneumonia, after an illness of two weeks, aged 42

Charles C Blanchard, M D Bennett College of Eclectic Medicine and Surgery, Chicago, 1883, physician at the Delavan (Wis) State School for the Deaf, a veteran of the Civil War, and formerly alderman and health commissioner of Delavan, died at his home in that city, April 19, aged 63

William Troy, M.D McGill University, Medical Faculty, Montreal, 1891, some time president of the Ottawa (Ont.) Medical Association, and one of the staff of the Water Street Hospital in that city, died at his home in Ottawa, April 13, after an illness of a year and a half, aged 45

James Hogan, M D Department of Medicine of the University of Pennsylvania, Philadelphia, 1842, a practitioner of Henry County, Mo, for nearly 30 years, and later on of Fort Scott, Kan, and Springfield, Mo, died at the home of his nephew in Knobnoster, Mo, April 12, aged 91

G Ernest Roy, M.D, Medical Department, Victoria College, Toronto, 1861, surgeon major of the Sixty fifth Regiment, government inspector of anatomy, who served during the rebellion in Cuba, died at his home in Hochelaga, Montreal, from diabetes, April 14, aged 74

Samuel Jefferson Montgomery, M.D Louisville (Ky) Medical College, a member of the Arkansas State and Conway County medical societies, died at his home in Morrillton, Ark February 2, from cirrhosis of the liver, after an illness of three years, aged 57

Henry Wells Spillman, M D New England Botanico Medical College, Worcester, Mass, 1848, who retired from practice 45 years ago, died at his home in Edgerton, Wis, April 1 one week after a fall in which he sustained a fracture of the head of the femur, aged 87

Joseph B E Gates, M.D University of Tennessee, Medical Department, Nashville, 1876, a member of the Kentucky State and Fulton County medical societies, died at his home in Fulton, Ky, from abscess of the liver, March 15, after an illness of six weeks, aged 62

Edwin Gaylord, M D Rush Medical College, Chicago, 1856, Medical Department University of Nashville (Tenn) 1859, a veteran of the Civil War, and for many years a practitioner of Magnolia, Ill, died at his home in Pontiac, Ill, April 16, from pneumonia, aged 73

Addison W Guernsey, M.D University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1854, for more than half a century a practitioner of Almond, Wis, died at his home in that village, March 3, after a long period of invalidism, aged 78

Charles A. Fortin, M.D University of Bishop College, Faculty of Medicine, Montreal, 1897, of Lewiston, Maine, a member of the Maine Medical Association and Androscoggin County Medical Society, died in Las Palmas, Canary Islands, March 22, aged 34

William M Kern, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1847, surgeon in the Federal service during the Civil War, who retired from practice 15 years ago, died at his home in Germantown, Philadelphia, April 17, aged 86

Robert Wilkie Martin, M.D Homeopathic Medical College of Pennsylvania, Philadelphia, 1865, a veteran of the Civil War for many years a practitioner of Philadelphia, died at his home in that city, April 11, after an illness of three years aged 65

Cecil Metcalf Ross, M.D Cornell University Medical College, New York City, 1902, formerly interne at the Smith Infirmary, Staten Island and the Sailors' Snug Harbor Hospital, died in La Paz Bolivia South America, March 24, from pneumonia, aged 30

Jonathan F Leaming, M D Jefferson Medical College, Philadelphia 1846 an aged practitioner of Cape May Court House N J, died in that place, April 25, from the effects of burns received during a fire at his home, two days before, aged 85

Morris P Roe, M.D Bennett College of Eclectic Medicine and Surgery, Chicago, 1873, a member of the Medical Society of Guthrie, Okla, died at his home in Fallis, Okla, April 7, from cerebral hemorrhage, after an illness of two hours, aged 58

Ezra Weis, M D University of Maryland School of Medicine, Baltimore, 1851, surgeon of the Ashland (Ky) General Hospital during the Civil War, a practitioner of Peoria, Ill., for 20 years, died at his home in that city, April 12, aged 87

James W Gray, M.D College of Physicians and Surgeons, Keokuk, Iowa, 1873, an old practitioner of Calhoun Mo, died at St Joseph's Hospital, Kansas City, Mo, April 10, two days after an operation on the intestines, aged 62

Charles W Austell, M.D Atlanta (Ga) Medical College, 1893, a member of the South Carolina Medical Association and Union County Medical Society, died at his home in Union, S C, April 13, after an illness of one month, aged 45

Edwin D Q Lowther, M.D Kentucky School of Medicine, Louisville, 1883, a member of the Clarke County (Ark) Medical Society, died recently at his home in Hollywood, from pneumonia, after an illness of 13 days, aged 40

Cary Randolph Bankhead, M.D St Louis Medical College, 1856, a member of the Pike County (Mo) Medical Society died recently at his home in Paynesville, Mo from catarrh of the bowel, after an illness of one week, aged 71

Medical Education and State Boards of Registration

COMING EXAMINATIONS

NEVADA State Board of Medical Examiners Carson City May 6 Secretary Dr S L Lee Carson City

ILLINOIS State Board of Health East St. Louis May 8 10 Secretary Dr J A Egan Springfield

LOUISIANA State Board of Medical Examiners New Orleans May 9 10 Secretary Dr F A Larue 211 Camp St New Orleans

MISSISSIPPI State Board of Health State Capitol Jackson May 14 Secretary Dr J F Hunter Jackson

MASSACHUSETTS Board of Registration in Medicine Room 15 State House Boston May 14 16 Secretary Dr F B Harvey Boston

FLORIDA State Board of Medical Examiners (Regular) Jacksonville May 15-16 Secretary Dr J D Fernandez, Jacksonville

NEW YORK State Boards of Medical Examiners Albany May 21 24 Chief of Examining Division Charles F Wheelock Albany

NEBRASKA State Board of Health State House Lincoln May 28 29 Secretary Dr Geo H Brash, Beatrice.

INDIANA Board of Medical Registration and Examination Room 120 State House Indianapolis May 28 31 Secretary Dr W T Gott Indianapolis.

Third Annual Educational Conference

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every day practice Contributions will be welcomed from our readers]

Antiseptic Powder

The *Druggists Circular*, April, 1907, publishes the following formula for antiseptic powder, furnished by F E Dudson, Charleston, S C

℞	Sodii salicylatis		
	Acidi borici, āā	ʒss	15
	Sodii bicarbonatis	ʒiii	90

M Sig Two teaspoonfuls in a pint of warm water Use as a douche

Erythematous Eczema

Shoemaker, in the *Nashville Journal of Med and Surg*, gives the following treatment of this condition

The patient is kept at rest in bed, and is allowed only milk diet Calomel, gr ii (0 13), is given in doses of a tenth of a grain (006) every half hour, this is followed by administration of magnesium sulphate, ʒiss (45) In addition, the patient is given internally vinum antimonii, min x (0 6) every three hours in water

Externally, to allay the itching, the following combination is applied with a sponge

℞	Creosoti	m x	6
	Magnesii carbonatis	ʒss	2
	Zinci carbonatis precip	ʒvi	24
	Glycerini	fʒi	4
	Liquoris calcis	fʒiv	15
	Aquæ hamamelidis q s ad	fʒi	30

M Ft lotio

Tinea Sycosis

In the treatment of this condition, the same author, in the *Hot Springs Med Jour*, states that in order to bring about a cure daily local applications of some anti parasitic remedy are all that is required Constitutional remedies are not absolutely necessary A 10 per cent. ointment of the oleate of mercury is applied twice daily This at once lessens the infiltration and induration of the parts and destroys the parasite To prevent extension of the infection a 10 per cent solution of thymol in olive oil should be rubbed in over the entire bearded surface

The prognosis in this condition is always favorable, but the time required to effect a cure varies considerably In some cases the simplest measures suffice, while in others months may elapse before the disease is eradicated Occasionally the disease may terminate in spontaneous recovery, but as a general rule if untreated it assumes a chronic form and persists for years

Coryza

This complaint occurs most frequently in the spring and autumn months, though to some extent it is always with us and is one of the most common conditions which we have to treat The disease is probably caused by a micro organism though in some cases it seems to be caused by irritation as from the fumes of certain drugs or by dust

E S McKee, in the *Therapeutic Gazette*, advises spraying the nose once daily with an alkaline and antiseptic solution, then with a 1 per cent solution of cocain with 0 40 per cent of boracic acid Five minutes later he uses a 2 per cent spray of antipyrin, and five minutes later insufflates with calomel, lastly, 1 per cent. of menthol in liquid petrolatum is sprayed into the nose.

Among a host of sprays for coryza he recommends the following

℞	Menthol	gr viii	5
	Camphoræ	gr v	3
	Petrolati liq	fʒi	30

M Sig Use as a spray

℞	Adrenalin chlorid	ʒi	4
	Cocain hydrochlorid	gr i	06
	Salt solution (8 per cent)	fʒii	60

M Sig Use as a spray two or three times daily

The patient should lie down for a few minutes after using this spray and should remain indoors for some time afterward

[The cocain spray should only be used or dispensed by the physician The patient should not be given a prescription —Ed]

℞	Sodii salicylatis		
	Sodii chloridi		
	Sodii bicarbonatis, āā, q s	ʒiii	100

M Sig A teaspoonful in one half pint of water and use as a spray

℞	Hydrogenii peroxidi	fʒi	30
	Hydrargyri chloridi corrosivi	gr i	06
	Zinci sulphocarbolatis	gr xx	1 33
	Aquæ dest	fʒv	148

M Sig Use as a spray after cleansing

As a stimulant to the mucous membranes the following may be used

℞	Thymol	gr 1/3	02
	Olei carophylli	m iii	19
	Petrolati liq	fʒi	30

M Sig To be sprayed in the nares two or three times a day

℞	Phenol (acidi carbolici)		
	Menthol		
	Olei gaultheriæ, āā	gr i	06
	Petrolati liq	fʒi	30

M Sig Use as a spray three or four times a day when an antiseptic is needed

As a sedative the following may be used

℞	Olei carophylli	m viii	50
	Terebenti	m xii	70
	Petrolati liq	fʒi	30

M Sig Use as a spray

℞	Olei cassiæ	m ii	13
	Menthol	m iii	19
	Petrolati liq	fʒi	30

M Sig Use as a spray

Snuffing of liquids of an alkaline and antiseptic character is often beneficial McKee recommends the following simple alkaline and antiseptic wash which can be made up at home Salt, one half teaspoonful, carbonate of soda, one teaspoonful, phenol (carbolic acid), 10 drops, water, one pint This is best used lukewarm, the patient stooping over, snuffing it through the nose and spitting it out of the mouth If snuffed through the nose in the erect posture or with the head thrown backward there is danger of the solution passing through the Eustachian tubes into the ear and causing trouble These alkaline solutions, if used regularly in flushing out the nares, are very beneficial in preventing coryza

Another consists of equal parts of salt, borax and bicarbonate of soda, one teaspoonful to a pint of water, use lukewarm

Hare's "Practical Therapeutics" states that camphor may be inhaled or taken internally in the early stages of cold in the head, with great relief, and that it exercises a decided influence in aborting an attack The following formula may be employed

℞	Camphoræ		
	Quininæ sulphatis, āā	gr ii	12
	Fluidextracti belladonnæ	m iss	09

Ft tabellæ No x Sig One tablet every hour for four or five doses

After the attack is well developed this is useless, but used early it will decrease the frontal headache, the sneezing and running at the nose

This author asserts that much benefit follows the use of sodium bicarbonate in 30 grain (2 0) doses every two hours for three doses He also states that a hot footbath with mustard in it and the taking of a hot drink such as lemonade, with or without whisky, on going to bed, are useful Often 20 or 30 minims (1.3 2 0) of sweet spirits of nitre added to this drink will increase its diuretic effect In other cases particularly in strong healthy men, from 5 to 10 grains of Dover's powder at bedtime will be found more efficacious

Medicolegal

Statements Made to Physician by Injured Person.

The Supreme Court of Alabama says, on the appeal of Gregory vs State, a homicide case, that as to statements made to a physician by the party who is the subject of the injury, the rule of exclusion extends as to declarations of its cause, or the way in which it occurred, these being regarded as mere narratives of past events, which must be proved by other and independent evidence But, from the necessity of the case, he may testify to the party's statements as to his symptoms, the locality and character of the pain, and give an explanation of his bodily condition, made while suffering, and for the purpose of enabling the physician to form an opinion of the nature and extent of the injury There was no error in permitting the physician to state what the deceased said during the examination as to his stomach and legs, namely, that he had no feeling in feet or legs, and had burning in the stomach

Evidence and Damages in Case of Femoral Hernia.

The Supreme Court of Washington says that the personal injury case of Hodd vs City of Tacoma was brought to recover damages for personal injuries alleged to have been sustained by falling on a defective sidewalk Almost immediately after the accident the plaintiff was removed to a hospital and subjected to an exploratory surgical operation for inguinal hernia A few weeks later it was discovered that she was suffering from a femoral hernia, requiring a second operation, which was then performed It was not seriously disputed that the first operation was performed immediately after the accident, that the plaintiff was confined in the hospital for six weeks thereafter, and that as soon as she attempted to stand on her feet it became apparent that a second operation for femoral hernia was necessary The plaintiff claimed perfect health prior to the accident The court holds that there was no error, under all the circumstances of the case, in permitting one of the attending surgeons, over objection, to testify that, in his opinion, the hernia last mentioned might have resulted from the plaintiff's fall on the sidewalk It also holds that a judgment for $5,000 damages was not excessive, or to be disturbed, inasmuch as the plaintiff's physicians gave testimony tending to show that some of her injuries were permanent, the testimony of her physicians standing without substantial dispute, while the defendant did not ask for the appointment of any commission of physicians to examine the plaintiff and report on her condition

Photographs of Portions of Human Body as Evidence

The Supreme Judicial Court of Massachusetts says that in the personal injury case of McKarren vs Boston & Northern Street Railway Company, during the testimony of the physician who attended the plaintiff, in describing the nature and extent of the enlargement of a portion of the vertebra of her spine, photographs of this portion of the back were introduced and used by him as illustrations While the photographer was not called, the witness, whose medical qualifications were not questioned, testified that the photographs were taken in his presence, and under his direction, and on admission they must be considered as forming a part of his evidence Alberti vs New York, Lake Erie & Western R R Co, 118 N Y 77, 88

The competency of such evidence if relevant, whether consisting of a model, diagram map, plan, picture or photograph, is established and is admitted for the purpose of giving to the jury a representation of the object or subject concerning which the inquiry is made and to enable them better to understand the issues on trial Blair vs Pelham 118 Mass 420 421 Before admission however there must be a verification of the accuracy of the representation and this is a preliminary inquiry to be made by the presiding judge whose decision is final Clapp vs Norton 106 Mass 33 and other cases

The defendant placed great reliance on Cunningham vs Fair Haven & Westville R. R Co 72 Conn 244 as an authority establishing a different rule but after discussing the weight to be given such a finding the court expressly says "We are not now called on to determine the legal correctness of a finding of this kind, or whether it can be reviewed The question presented by the record is whether it was error to admit this photograph without any evidence of its accuracy"

Again, the defendant contended that a higher degree of verification was necessary and should have been required than when the representation describes inanimate objects, as the accuracy of the reproduction of the animate human form varies according to the position and adjustment of the camera, the skill of the artist and condition of the atmosphere It is undoubtedly true that the photographer may produce a picture which is misleading when compared with the subject represented, but so can the civil or mechanical engineer by his plan drawing or model made by hand, and while such misrepresentation may result from lack of professional skill or proper adjustment of the photographic apparatus, it also may be the deliberate product of the most skilful exercise of the art

This ground of possible deception when the human form is either wholly or partially portrayed was not, however, recognized as a distinction in Deforge vs New York New Haven & Hartford R. R Co, 178 Mass 59, where a radiograph of a fractured human foot, if properly taken, was held to be admissible when verified in the usual manner, while in Com vs Campbell, 155 Mass 537 and in Com vs Morgan 159 Mass 375, on the question of identity, a photograph showing the defendant's personal appearance was held to have been properly admitted In each of these cases physical characteristics were depicted, and if admissible to show the appearance of one part of the human body there would seem to be no sufficient reason why a photograph of other parts, when relevant, and properly verified, should be excluded

The testimony of the photographer was not required if the judge was satisfied by other evidence, as he apparently was that they were substantially accurate representations of the plaintiff's person Com vs Morgan, above cited Van Houten vs Morse 162 Mass 414 Archer vs N Y, N H & H R R Co 106 N Y 589, McGar vs Borough of Bristol, 71 Conn 652

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York

April 20

1 *Refraction Changes Dependent on Glycosuria C M Gould Philadelphia
2 *Unusual Results of Intrathoracic Compression J B Barringer Jr New York
3 Dermatologic Transitions O M Wilson Ottawa Canada
4 Criminal Aspect of Venereal Diseases in Children W J Cobb New York
5 *Treatment of Tuberculosis in Arizona I A Brewer Fort Huachuca Ariz.
6 The Stomach Tube in Diagnosis N B Foster New York
7 Unsuccessful Operation for Intestinal Obstruction on a Child of Fifty five Hours H Crutcher Mexico Mo

1 **Refraction Changes Dependent on Glycosuria** —Gould reports a case of refractive changes due to glycosuria observed by him and also the histories of 22 cases observed by others that have been published He says that eyestrain may have aided in producing the functional dietetic and nutritional disease called glycosuria that the majority of cases are in presbyopes that eyestrain and glycosuria form a vicious circle that warnings given by refraction changes should lead to immediate treatment of early and curable cases of glycosuria to prevent the later organic changes in the ocular structures

2 **Unusual Results of Intrathoracic Compression** Barringer reports three cases of collateral venous circulations of unusual extent following thrombosis and compression of the superior vena cava and left innominate vein and an uncommon physical sign of bronchial compression This sign consisted of a hyperresonant or tympanitic note over the compressed bronchus

5 **Treatment of Tuberculosis in Arizona** —Brewer makes a plea for more care in selecting tuberculous patients to

Arizona and urges that only such patients be sent as have means to secure proper food and comforts He gives a concise statement of the advantages and possibilities of the different health resorts of the state

New York Medical Journal
April 20

8 *Seven Cases of Appendicitis J A Wyeth New York
9 Street Dirt and Public Health W G Thompson New York
10 *Treatment of Typhoid Spine. V P Gibney New York
11 Pathology of Function An Experimental Laboratory Course. H Emerson New York.
12 Recent Investigations in Syphilis and Their Practical Application B Lapowski New York
13 Pasteurization—Its Advantages and Disadvantages to the Municipality J Roby Rochester N Y
14 *Modified Buttermilk in Infant Feeding C F Judson and R O Clock Philadelphia
15 Tuberculous Peritonitis, with Report of Cases E Novak Baltimore.

8 **Appendicitis**—Wyeth reports seven cases to emphasize the great danger in delaying surgical intervention in typical cases of appendicitis, and in all cases of recurring, though mild, attacks

10 **Treatment of Typhoid Spine**—Gibney insists on the use of the Paquelin cautery as a regular line of treatment so long as tenderness and pain on movement exist He says that even after all tenderness subsides it is a good plan to employ the cautery occasionally, once a week, or once in two weeks The administration of hypnotics should be left to the individual practitioner

14 **Modified Buttermilk in Infant Feeding**—Judson and Clock fed 12 infants suffering from malnutrition and enteritis on modified buttermilk, with excellent results The longest period of continuous feeding on buttermilk was six weeks

In preparing the buttermilk for these cases two deviations were made from the usual method The casein was diluted considerably to make the proportion present from 1 5 to 2 per cent, and the sugar added only in sufficient amounts to bring the proportion present in the mixture up to 5 per cent More over, the mixture was not brought to the boiling point, but heated only to from 140 to 155 F for ten minutes, so that the lactic acid bacteria were not destroyed Robinson's barley flour was added instead of wheat flour, one half ounce to each pint and a half, and cane sugar solution (6 and 9 per cent strength) was used to dilute the casein

The method of preparation of the weaker mixture was as follows Ingredients used were one pint of buttermilk, eight ounces of a 6 or 9 per cent solution of cane sugar, one half ounce of Robinson s barley flour 1 Make a paste of the flour and a small quantity of the sugar solution 2 Add buttermilk and the remainder of the sugar solution to this paste and mix thoroughly 3 Heat the mixture to 155 F for 10 to 15 minutes, stirring constantly 4 Remove from stove, cool, and place on ice

In feeding the infants on buttermilk the principle followed was to begin with a moderately strong mixture, which they called "two thirds" mixture, containing from 1 to 1 5 per cent fat, from 4 to 5 per cent sugar, and from 1 5 to 1 75 per cent proteid After tolerance for this mixture had been established as evidenced by normal temperature and good condition of the stools, the fat percentage was increased If the infant's digestion still remained good, the formula was increased to "three fourths" mixture with a simultaneous increase in the fat percentage The three fourths mixture contained from 1 5 to 2 5 per cent fat, 5 per cent sugar, and from 1 75 to 2 per cent proteid

Boston Medical and Surgical Journal
April 18

16 Diseases of the Nasopharynx in Infancy J L Morse Boston
17 Surgical Aspects of Empyema. F B Lund Boston
18 Empyema from the Physician s Standpoint H F Vickery Boston
19 *Periductal Myxoma of the Breast. W P Graves Boston
20 *Intrapleural Injections of Formalin in Pleurisy with Effusion L D Chapin Springfield Mass

19 **Myxoma of Breast**—In the case reported by Graves the tumor was so large and cumbersome that the patient when sitting down was obliged to rest it on a table or on the arm of a chair The patient was only 38 years old and the tumor which weighed 16½ pounds, was first noticed three years previously It was entirely discrete and was removed easily During the last two or three months the tumor grew very rapidly, due to a sarcomatous metaplasia

20 **Pleurisy with Effusion.**—Chapin reports a case of pleurisy with effusion, in which he injected intrapleurally a 2 per cent formalin solution in glycerin Only one injection was made, but it resulted in a cure Other treatment, which had been employed previously, did not prevent a reaccumulation of the fluid so that repeated tappings were necessary

Lancet-Clinic, Cincinnati.
April 20

21 Deafness Its Differential Diagnosis and Prognosis B L W Lloyd Evansville Ind.
22 Acute Intestinal Obstruction M A. Tate Cincinnati.
23 *Varicose Veins of the Tongue R. H Johnston, Baltimore
24 Gallstone W C Abbott Chicago
25 The Medical Expert and His Trials. E S McKee Cincinnati

23 **Varicose Veins of Tongue**—Johnston reports the case of a woman, 64 years old, who had suffered much from throat trouble, cough and shortness of breath On examination he found on both borders of the tongue, beginning at the anterior pillars, and extending forward to within half an inch of the tips bluish, tortuous masses, round, and measuring about 4 mm in diameter The ranine veins on the under surface of the tongue were unusually large and tortuous The condition had caused no inconvenience and no cause for its presence was discoverable There were no signs of congestion in the throat Johnston is inclined to believe that the enlarged veins were of congenital origin

St Louis Medical Review
April 13

26 Opsonic Treatment of Bacterial Diseases O H Brown St Louis
27 Spirochæta Pallida and Syphilis C Fisch St. Louis
28 Tertiary Manifestations of Syphilis R H Davis, St. Louis
29 Professor Ernst von Bergmann H Tuholske St. Louis

Journal of Experimental Medicine, New York.
March

30 *Biology of Diplococcus Intracellularis S Flexner New York
31 *Experimental Cerebrospinal Meningitis in Monkeys. S Flexner New York
32 *Serum Therapy for Experimental Infection with Diplococcus Intracellularis S Flexner, New York
33 Bacteriology of Rheumatic Fever J M. Beattie Edinburgh Scotland
34 Leucoprotease and Anti leucoprotease of Mammals and Birds D L Opie and B I Barker New York
35 Electrical Charge of Native Proteins and the Agglutinins C W Field and O Teague New York.
36 *Heterotransplantation of Blood Vessels Preserved in Cold Storage A Carrel New York
37 Nuclein Metabolism in a Dog with Eck s Fistula T E Sweet and P A Levene New York

30 **Biology of Diplococcus Intracellularis**—During the 1904 5 epidemic of cerebrospinal meningitis in New York, Flexner, as a member of a commission appointed by the health department of New York for the investigation of the disease, made an exhaustive study of the pathogenic properties of *Diplococcus intracellularis* The brief vitality of this organism on artificial media is not due to exhaustion of the medium or to accumulation of products except, perhaps, when in large quantities When suspended in salt solution the cocci rapidly die Not only is the solution fatal, but they soon lose their staining properties and disintegrate He finds, too, that cold is injurious a temperature just above zero being quickly fatal In the cold, disintegration, however, is less rapid Hence it is concluded that disintegration is the result of enzyme action The diplococcus lives much longer in medium to which some calcium has been added or in Ringer s solution This shows that the brief viability in salt solution is not due to hypertonicity of the medium, to starvation alone, or to a natural brief period of vitality, but that sodium chlorid is distinctly poisonous to the diplococcus, and this poisonous action is at least partly offset by other salts The enzyme in question is intracellular and is liberated by the death of the cell It is not destroyed at 60 C at which temperature the organism is killed, but at 65 C, and at higher temperature its activity is much reduced It acts alike in sodium chlorid and in Ringer's solution, but potassium cyanid inhibits its power of causing disintegration of the cell, if the potassium cyanid is subsequently removed autolysis proceeds again The enzyme is not specific but causes disintegration of many other varieties of bacteria both Gram and non Gram staining, the latter more easily than the

former The author concludes that the autolytic and proteolytic ferments are independent since the diplococcus produces no proteolytic ferment, and the autolytic ferment in certain organisms as pyocyaneus, which produces marked proteolysis, is very slightly autolytic

Strains of the diplococcus of meningitis vary much in their pathogenic properties, the freshly isolated ones being on the whole much more virulent than those under artificial cultivation for a time Some strains remain virulent for a few days, others for months When the virulence is once lost it can not be restored by animal passage When comparatively small quantities are injected into guinea pigs intraperitoneally, death usually results in less than 24 hours The autolysates (autolyzed fluids) also are toxic, even if centrifugated, and if filtered through porcelain The toxicity is not reduced at 65 C, and hence the toxic body and the enzyme are independent since the latter is appreciably affected at this temperature The death of the animals is produced by the toxin liberated by the disintegration of the bacterial cell and not by extracellular poison

31 **Experimental Cerebrospinal Meningitis**—In the lower monkeys Flexner was able to produce an acute inflammatory condition of the meninges which resembles very closely the lesions produced by the *Diplococcus intracellularis* in man The organisms obtained from typical cases of epidemic cerebrospinal meningitis were introduced directly into the spinal canal of monkeys by means of lumbar puncture In the course of a few hours the animals became ill with certain characteristic symptoms and in a number of animals death took place in from one to three days The lesions found at autopsy very closely simulate those occurring in man In both are found encephalitis, acute endarteritis, inflammation of the dorsal ganglia, internal hydrocephalus, fibrinous and other thrombi, relatively small amount of fibrin in the exudates, phagocytosis of diplococci The inflammation extends in monkeys into the membranes covering the olfactory lobes and into the ethmoid plate and nasal mucosa The latter was often found inflamed, and smears from its surface showed cocci having many of the characteristics of the *Diplococcus intracellularis* In none of the cases was it possible to cultivate the meningococcus, but this was probably due to its brief viability in the nose of the monkey This olfactory inflammation is important because it shows that the localization of the exudate at the base of the brain is not necessarily produced by the infection arising from the nasal mucosa as has been assumed in human infections

The degree of susceptibility of the monkey is very slight compared with that of man, because the amount of culture necessary to produce symptoms or to cause death is enormous compared with the probable amount necessary to cause the disease in man The amount injected into the canal in these experiments varied from two loops of a fresh culture to several cultures Flexner believes that the actual multiplication of the diplococci, except possibly in the abscesses, is very small, in some cases there is none at all This is in marked contrast to what occurs in man Injections of enormous quantities of the diplococcus intravenously or into other tissues of the body produce practically no symptoms except a slight local tenderness and swelling

32 **Serum Therapy for Experimental Diplococcus Infection.**—Flexner concludes from experiments that while various agents as normal and immune sera and even bouillon may affect favorably the course of an experimental infection, immune serum possesses the highest protecting power The outlook is not especially encouraging, however since the infection in the animals used is so rapidly fatal Two monkeys were immunized against the diplococcus by successive injections for a period of nine months The animals were bled to death the sera collected and its immune properties tested by injection into the spinal canal of monkeys simultaneously with cultures of diplobacilli and also after a period of six hours The results show that monkeys injected simultaneously with serum and culture in this manner may be prevented from developing severe symptoms by separate injections of the culture and six hours later of the serum the monkey already ill could be saved apparently from certain death

The normal monkey serum also has some protective power when employed in certain cases In other cases the mixture of serum and diplococci served to hasten the fatal outcome No attempt is made to apply these results to human beings affected with meningitis The results on the whole were not constant or striking enough to warrant great expectations Possibly the more protracted course in man as compared with that in the inoculated animals may be a favorable condition, and by treatment with appropriate antisera, at the proper time, more encouraging results might be obtained The protective power of normal serum might also be taken advantage of, in cases of human infection, by intraspinal inoculation

36 **Heterotransplantation of Blood Vessels.**—Carrel's experiments show that blood vessels transplanted from dog to cat act as arteries for 77 days at least, and that having spent several days in cold storage does not interfere with their ordinary functions The animals operated on must, however, be kept under observation for several months, or, indeed, for several years, before any conclusion can be drawn concerning the practicability of this method of preservation and heterotransplantation of blood vessels

American Medicine, Philadelphia
March

38 *Choice of Ligature and Suture Material in Surgery of Peritoneum H G Wetherill Denver
39 *Sixty-eight Consecutive Laparotomies for Pyosalpinx without a Death C E McGirk Phillipsburg Pa
40 Ventrosuspension. H D Beyea, Philadelphia.
41 *Autotoxemia. J C Warbrick Chicago
42 *Gastroptosis with Special Reference to Its Treatment J J Gilbride Philadelphia
43 *Diagnosis of Cardiac Disease R J Behan Pittsburg Pa
44 *Vincent's Angina J D Blackwood Jr Philadelphia
45 *Electricity in Treatment of Rheumatism A. R Rainear Philadelphia
46 Trypanosomiasis in Portuguese Southwest Africa F C Wellman Angola West Africa

38—See abstract in THE JOURNAL, Jan 13, 1906, page 146

39 **Pyosalpinx**—Double salpingectomy was done by McGirk in 36 cases and single salpingectomy in 32 cases Appendectomy was done at the time of operation in 17 cases

41 **Autotoxemia**—Warbrick reports seven cases of autotoxemia to illustrate his contention that the condition is one which may be mistaken for indigestion dyspepsia anemia malnutrition, etc

42—See abstract in THE JOURNAL Oct 20, 1906, page 1322

43 **Cardiac Disease.**—Behan disclaims against pronouncing a case one of heart disease without attempting to make a more specific diagnosis He reviews briefly the pathognomonic signs which are an aid in diagnosis

44 **Vincent's Angina**—Blackwood reports nine cases of Vincent's angina occurring in children ranging in age from 2 to 10 years. Of these nine cases ten were of the superficial or mild diphtheroid type, and two were in healthy children smears from whose throats showed the presence of *Bacillus fusiformis* in one instance, associated with the spirillum The seat of the attack was the lips, tongue gums cheeks, tonsils or pharynx, and in none was there marked destruction of tissue There was no glandular enlargement in any case

45 **Electricity in Rheumatism**—Rainear reports three cases of rheumatism in which he employed the continuous current successfully

American Journal of Obstetrics, New York
March

47 Clinical Significance of Urinary Nitrogen Metabolism in Toxemia of Pregnancy J Ewing and C G L Wolf New York.
48 *Conorrhea in Women C L Hunner Baltimore
49 *Case of Malignant Teratoma of Ovary R T Frank New York.
50 *Should the Ovaries be Removed when Hysterectomy or Removal of Body of the Uterus is Done? J W Borce Washington, D C
51 Report of the Gynecologic Service in the Georgetown University Hospital from Its Opening until the Present Time J T John on Washington D C
52 *Etiology of Endometritis L A Ewald New York
53 Symptoms and Clinical Course of Endometritis J O Polak Brooklyn N Y
54 Treatment of Endometritis R Waldo New York

47 **Urinary Nitrogen in Toxemia of Pregnancy**—According to Ewing and Wolf the study of urinary [illegible] nishes a new and fundamental [illegible]

tion of toxemia of pregnancy, which must be tested carefully, not with the idea of displacing other criteria, but with a view of supplementing them with information of a more precise character The results of their observations lead them to believe that the urinary nitrogen may have the following practical applications in pregnancy It may determine the existence and gravity of a toxic condition In urgent cases it may be relied on with some caution to determine the safest treatment It frequently establishes the trifling importance of symptoms referable to transitory gastric disorders It may indicate an abnormal state of metabolism when other symptoms are absent, and thus form the basis of treatment designed to avoid some of the serious complications of pregnancy It is of great value in determining the true condition of the patient in the pre eclamptic state, and in distinguishing between simple chronic nephritis and impending eclampsia It is an excellent guide in determining the progress of convalescence It is not to be relied on exclusively, however, and more than any other set of the phenomena of the disease, but only in connection with all the data in the case

48 **Gonorrhea in Women**—Hunner discusses the lower genital tract infections, the urinary tract infections, the upper genital tract infections and peritoneal infection

49 **Teratoma of Ovary**—Frank's patient, aged 35 years, mother of one child, gave a good family history and in her personal history there was no evidence of illness, tumors or multiple pregnancies The patient had always experienced what she termed a weak feeling in the right side which manifested itself in weight, discomfort, and a dragging sensation, after even moderate exertion, such as walking In September, 1898, she struck the right side of her abdomen against the edge of a table and soon after symptoms suggestive of appendicitis manifested themselves The acute symptoms gradually subsided, but there appeared a gradual loss of strength, an increase of constipation and a slight rise of the evening temperature Finally, a diagnosis was made of tumor, probably malignant, and operation was advised.

On opening the peritoneal cavity the greatly distended intestines crowded through the wound Immediately behind the bowel an immense yellowish tumor presented, consisting of nodular, very friable masses, and large festoons of fluctuating, thin walled cysts of various sizes grouped in grape like clusters The mass was everywhere adherent On the peritoneum were lumps and nodules not connected with the main mass The most accessible parts of the growths were severed between ligatures, great difficulty being experienced in removing a sufficient amount to permit of closing the abdomen The patient's condition remained the same as before operation She became progressively worse and died three months afterward There was no autopsy Microscopic examination of the tumor showed a teratoma in which all three fetal layers were well represented There were present skin, with its appendages, nervous tissue, cysts lined with unclassifiable epithelium, bone, cartilage, connective tissue, unstriped muscle, analogues of the embryonal intestine and acinous glands The active stage of the disease extended over about seven months, death resulting from general inanition

50 **Removal of Ovaries**—Bovée summarizes his paper as follows 1 The existence of an ovarian secretion has not been proved and therefore should not act as a bar to oöphorectomy 2 In all cases of removal of the uterus or its body for disease in women of more than 40 years the ovaries would best be removed 3 As 5 per cent of malignancy exists in the cases of uterine fibroids brought to operation, and in 30 per cent marked complications of the appendages are present, leaving the ovaries when the uterus or its body is removed for such condition is hazardous to the future well being of the patient 4 In malignant disease of the uterus in which radical surgery is indicated removal of both ovaries is imperative 5 The indications for removal of the ovaries when partial or complete hysterectomy is done are increasing instead of diminishing 6 When ovarian growths of a bilateral nature complicate the hysterectomy both ovaries should be removed, though one seems normal

52 **Etiology of Endometritis**—Ewald presents a general review of this subject, but presents nothing new

Journal of the Medical Society of New Jersey, Orange

March

55 *Plea for Use of United States Pharmacopeia and Standard Pharmaceuticals vs. Proprietaries. H H Sherk Camden
56 Extrauterine Pregnancy Occurring in Same Individual at Five Months Interval A. T Bristow Brooklyn N Y
57 Tuberculosis G K Dickinson Jersey City
58 *Is the State Medical Examining Board a Success? J R Stevenson, Haddonfield.

55 **Plea for Use of Standard Pharmaceuticals**—Sherk discusses this subject from the same standpoint as that taken by other writers with whom he agrees as to the cause of the indiscriminate use of non official remedies and how to encourage the use of standard preparations

58 **Is State Medical Examining Board a Success?**—Stevenson says that experience tends to impress on us the view that no board composed of physicians only can prevent the people from looking on them with a suspicion of interestedness The paper rather conveys the impression that state boards and medical examiners are not as great a success as most people are inclined to believe

California State Journal of Medicine, San Francisco

March

59 Present Status of Intranasal Surgery L. C Deane San Francisco
60 Case of Acute Fatal Pancreatitis J W Jones and J M Burlew Santa Ana
61 *Practical Point in Instrumental Diagnosis C M Cooper, San Francisco
62 Diagnosis and Treatment of Extrauterine Pregnancy G B Somers San Francisco
63 European Clinics E C Sewall San Francisco
64 *Laboratory Methods of Diagnosis in Typhoid. H W Allen San Francisco
65 Treatment of a Few Diseases of the Rectum, by General Practitioner J I C Young St Louis Mo
66 *Reports of Focal Operations in Hip-joint Tuberculosis H M Sherman San Francisco
67 Effect of Roentgen Rays on Epithelial Structure of Skin D W Montgomery San Francisco
68 *Treatment of Pyelitis and Urethritis by Urethral Catheterization and Lavage G L. Eaton San Francisco

61 **Instrumental Diagnosis.**—Cooper cites an instance which emphasizes the necessity of injecting a little sterile water into a catheter or any other tube which is perforated before the tube is withdrawn so as to force away from the eyelet the mucous membrane, which otherwise might be torn off and brought away with the tube When the proctoscope is used air instead of water may be injected

64 **Laboratory Methods in Diagnosis of Typhoid.**—Allen discusses briefly the various methods that are of value in diagnosing suspected cases of typhoid, such as blood cultures, serum diagnosis, and the leucocyte count

66 **Focal Operations in Hip Joint Tuberculosis**—Sherman says that the possibility of health from an operation directed against the diseased focus in the hip should be considered and discussed very carefully, and that this must always be done with one thought clearly kept in mind, that a tuberculous bone lesion is practically always more serious and more extensive than outside evidences lead one to believe He has done the tunneling operation five times, but in only one case was it apparent that the operation could have been a success

68 **Catheterization and Lavage in Pyelitis and Ureteritis**—Eaton reports the history, urinary analysis and treatment in 23 cases of pyelitis and ureteritis, 8 bilateral and 15 unilateral The treatment consisted of passing the ureteral catheter every third or fourth day and injecting into the pelvis of the kidney *about 5 c.c. of a 2 per cent silver salt solution* Marked improvement resulted in each case Eaton emphasizes the necessity for a careful examination of the urine previous to and during the treatment

Journal of the New Mexico Medical Association

March 15

69 Benefit of Climate in Cure of Tuberculosis. D H Carns Albuquerque
70 Circulatory Respiratory and Vasomotor Stimulants W H Burr Gallup
71 Adenoids C S Losey Las Vegas
72 The Sympathetic Nervous System F Palmer Cerrillos
73 Management of Pregnancy R. E McBride Las Cruces

American Quarterly of Roentgenology, Pittsburg

October

74 *Teaching of Roentgenology in Medical Colleges. V J Willey, Detroit Mich
75 *Roentgen Rays in Treatment of Acne Acne Rosacea Eczema and Psoriasis A. P Biddle Detroit Mich

74, 75—See THE JOURNAL, Sept 15, 1906, pages 887 8

Montreal Medical Journal.

March

76 Perforation in Typhoid A McPhedran Toronto
77 Appendicitis. J B Harvie, Troy N Y
78 Cervical Ribs Causing Pressure of Brachial Plexus C K. Russel Montreal
79 Partial Gastrectomy for Pyloric Cancer A. E Garrow and C A Peters
80 Koch Weeks Conjunctivitis H McKee Montreal
81 Clinical Notes from Alexandria Hospital J C Fyshe and A W Hunter

Archives of Otology, New York

December

82 Case of Bilateral Cerebral Disturbance of Hearing with Aphasia. G Boenninghaus Breslau Germany
83 So-called Cyclic Course of Acute Otitis Media O Koerner
84 Exostoses and Hyperostoses of Ear Canal as Cause for Severe Purulent Otitis. Dr Meyer Hanover
85 Herpes of the Auricle with Neuritis of the Facial Nerve. T Sarai Japan
86 Purulent Meningitis Following Radical Mastoid Operation R. J Held and S J Kopetzky, New York
87 Acute Sepsis Beginning on the Third Day of an Attack of Acute Middle Ear Inflammation J Dunn Richmond Va.
88 Differential Diagnosis in Otitic Sinus Thrombosis F Voss Riga

Texas Medical News, Austin.

January

89 Latent Gonorrhea M. B Saunders Waco
90 Puerperal Embolism C A. Gray Bonham
91 Abscess of Lungs Operation J B Stinson Sherman
92 Hematuria. J L. Rountree Argo
93 Internal Medicine vs Surgery W F West, Waxahachie.

Iowa Medical Journal, Des Moines

March 15

94 Is Mental Effort of Therapeutic Value? F T Seybert Council Bluffs
95 Normal and Perverted Carbohydrate Metabolism J C Ohlmacher Independence
96 Carcinoma A B Bowen Maquoketa
97 Diphtheria and Its Treatment. A P Stoner Des Moines
98 Functions of the Peritoneum P B McLaughlin Sioux City
99 Case of Brain Injury P T Geyerman Worthington Minn
100 President's Address of Harrison County (Iowa) M S T Macfarlane Mondamin
101 Medical Treatment of Epithelioma W R Bollbaugh Osceola

Medical Library and Historical Journal, Brooklyn

December

102 The Mondino Myth L. S Pilcher Brooklyn
103 Lessons from Life of Major Walter Reed H A Kelly Baltimore
104 Leonardo Da Vinci and Vesalius J P McMurrich Ann Arbor Mich.
105 Joseph Roby the Anatomist F T Cordell Baltimore
106 Biography of François Magendie (Continued.) P M Dawson Baltimore

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest

British Medical Journal, London

April 6

1 *Lord Lister and the Evolution of Wound Treatment During the Last Forty Years H C Cameron
2 *Dr H Jackson's Views of Functions of the Cerebellum V Horsley
3 *Iodin Spirit Catgut J S Riddell

1 **Evolution of Wound Treatment.**—Among the points considered by Cameron in his discussion of the evolution of wound treatment are the following Acupressure, earliest form of antiseptic treatment, the buried ligature, the introduction of protective and shellac plasters, and of antiseptic gauze, the antiseptic spray, the employment of drainage tubes, mercurial gauze dressings, antisepsis by heat sterilization of the skin, hands and instruments, the treatment of compound fractures and of chronic abscesses associated with osseous caries

2. **Functions of Cerebellum**—Horsley's conclusion is that all research tends to confirm the view held by ancient and modern investigators that the cerebellar cortex is the first chief station of representation of the afferent basis of movements of all the skeletal muscles

3 **Iodin Spirit Catgut.**—As the result of two years of constant use of this catgut Riddell is convinced that it is sterile that it loses none of its tensile strength in preparation that it can be stored indefinitely in the solution in which it is prepared without becoming brittle, that it is soft and nice to handle, that it is readily and simply prepared and without any undue expense, and that it is absorbed completely but only after it has served its purpose

The Lancet, London.

April 6

4 Pathology of Melanotic Growths in Relation to Their Operative Treatment. W S Handley
5 Increase of Insanity G H Savage
6 *Area of Acute Abdominal Conflux and the Incision of Incidence C P Childe
7 *Amyl Nitrite in Hemoptysis. G A Crace-Calvert.
8 Aseptic and Septic Midwifery in the Liverpool Workhouse Hospital W Alexander
9 Multiple Circumscribed Lipomata Treated with Ethylate of Sodium A. F Savill
10 Teaching of the Hygiene of the Expectant and Suckling Mother J F J Sykes.
11 Rôle of Blood Plasma in Disease H Campbell

6 **Acute Abdominal Conflux.**—The area of acute abdominal conflux is described by Childe as being an area bordered by two lines in which almost every acute abdominal crisis either must or does occur A perpendicular line is drawn from opposite the esophageal opening of the stomach, about one inch to the left of the sternum on the seventh costal cartilage, to Poupart's ligament A second line is drawn from the right anterior superior iliac spine, perpendicularly upward to the lower border of the thorax Between these two lines is the area of acute abdominal conflux The incision which will lay bare this area is a vertical one midway between the lines, just about the outer border of the right rectus This is the incision of incidence. It commences about the level of the umbilicus and continues downward Childe claims that this incision exposes to sight that part of the abdominal cavity which in a large proportion of cases must contain the offending organ, and which in another large proportion of cases does, as a matter of fact, do so When it fails to expose the offending organ the abdomen can be examined by touch just as well through the right semilunar as through the median incision

7 **Amyl Nitrite in Hemoptysis**—Crace Calvert claims that nitrite of amyl is the most valuable drug in practically all cases of hemoptysis It produces such an immediate fall in the general blood pressure, by dilatation of the vessels throughout the body, that the pressure at the bleeding point is lowered and there is time for clotting to take place, while the hemoptysis usually ceases almost instantly The inhalation of three minims usually checks the bleeding almost at once

Journal of Obstetrics and Gynecology of the British Empire, London.

April

12 *Chorea During Pregnancy W F Shaw
13 *Occasional Occurrence of Peculiarly Offensive Condition of Liquor Amnii M Handfield-Jones
14 Technic of Operations on Uterine Appendages H Jellett
15 *Four Cases of Early Ectopic Pregnancy A M Sinclair
16 New Method of Performing Ventrosuspension of the Uterus A M Sinclair
17 Rhythmic Chorea (Pseudochorea?) in Early Pregnancy C B Marshall
18 Hydatids (Acephalocysts) of the Abdomen and Pelvis Removed by Abdominal Section F H Champneys
19 Multiple Fibromyomata of the Uterus Curiously Similar in Character in Mother and Daughter H Macnaughton Jones
20 *Effect of Pregnancy on Alopecia Areata G G S Taylor and R W Mackenna

12 **Chorea During Pregnancy**—Shaw reports 11 cases in two of which the patients were treated on traditional lines with very poor results The remaining nine patients were put on a milk diet and elimination was increased as was first suggested by Fothergill and the results obtained were satisfactory in every way

13 **Infection of Liquor Amnii**—Handfield Jones found five instances of infection of the liquor amnii among 3,300 accouchements The fluid is compared to an ordinary typhoid stool and was extremely offensive in odor, the odor being of a fecal nature It contained pus blood crystals of cholesterin and some columnar epithelium bile stained It also contained many bacteria mainly staphylococci and colon bacilli

15. **Ventrosuspension Uterus.** as an opening the anteri[illegible] [illegible]gh i[illegible]

67 Mycelium Formation Credited to the Diphtheria Bacillus (Mycelbildung des L Diphtheriestäbchens) W Spirig
68 *Diagnosis of Acute Mediastinal Affections (Ak. Mediastinalerkrankungen) M. v Arx
69 Symptomatology and Diagnosis of Injuries of the Heart. (Perkutane Herzverletzung) Momburg
70 Surgical Treatment of Diverticulum of Esophagus (Speiserröhrendivertikel) G Zesas.
71 Etiology of Rupture of Tendon of Quadriceps (Quadricepssehnenruptur) Axhausen.

58 **Lateral Suture of Artery After Extirpation of Sac Aneurism.**—Garré reports what he believes is the first case of extirpation of a true sacculated aneurism with lateral suture of the artery and recovery of the patient. The aneurism had developed from the vein, but the artery was adherent to the vein at this point with a communication between them The aneurism was resected, the vein ligated above and below, and the opening into the artery closed with a longitudinal suture in the side of the artery He adds that in case it is deemed unwise to apply the tourniquet, the flow of blood through the artery can be arrested by passing a loop of thread around the vessel, above and below, and occluding the lumen by kinking the artery by simple traction on the thread This method is less dangerous than application of forceps or direct ligature which is liable to injure the intima

60 **Injuries of Liver**—Dencks reports seven cases of injury of the liver in which surgical treatment was successful in three The injuries in the cases with a favorable outcome were A bullet wound, a kick from a horse, and injury from being run over The others were very serious contusions with other injuries Rigidity extended over the entire abdomen in every case, and the pain on palpation was also diffuse, although more pronounced on the right side Tamponing alone arrested the hemorrhage in the three favorable cases The pulse gave no signs of the internal bleeding, being relatively good even in the most rapidly fatal cases In one instance the gauze tampon answered a double purpose, draining a pus pocket that developed between the diaphragm and the liver His experience confirms the value of tamponing as the best, safest, most rapid and effectual method of arresting hemorrhage in case of rupture of the liver, although a suture may be advisable for a smooth and conveniently located stab wound.

62 **Operative Treatment of Multiple Tuberculous Strictures of the Intestine**—Ito and Asahara report five cases One of the patients succumbed a few months later to acute phthisis Three others were restored to comparative health The symptoms are those of any gradually encroaching stricture in the intestines, but they were less pronounced when the stools were watery than with solid stools Partial exclusion with lateral enteroanastomosis was done in three cases and the results were brilliant in every instance In another case nothing was done beyond the mere laparotomy, as more than 29 cicatricial strictures of a moderate degree were scattered along the entire small intestine This patient is still in the clinic and has had no colics since, but the pulmonary affection is continuing a progressive course The patient treated by resection of 95 cm of the small intestine succumbed to collapse Lateral enteroanastomosis relieves the patient at once of all disturbances and by improving the general condition promotes the chances of spontaneous elimination of the remaining infectious germs Cases are on record in which even a process in the lungs retrogressed afterward

63 **Permanent Cures After Cancer Operations**—Steiner reports from Dollinger's clinic at Budapest that of 175 cancer patients operated on 40 per cent are living at least three years after the operation, and 41 25 per cent of 80 after an interval of five years at least These figures include 25 and 18 cases in which the cancer had recurred but had been promptly removed The cancers are classified according to their location, and the experiences with each group are reviewed in detail.

64 **Pathology and Treatment of Ileus**—Göbell publishes the report of 63 cases of ileus in which operative treatment was undertaken at Helferich's clinic at Kiel, 1899 1906 In only two instances was it possible to palpate a strangulated loop through the rectum or vagina Distended loops felt in this way generally proved to be parts of the afferent intestine In the 21 cases with strangulation the pain was localized in only three, but shock was always present, and initial vomiting occurred in all but five cases A free effusion was observed in 11 cases In one the modification of the resonance on change of position led to the assumption of a tuberculous effusion, but puncture brought the contents of the small intestine instead of the expected effusion He regards appendicostomy as extremely useful and indicated in case of ileus when there is cancerous stenosis of the colon, and in case of volvulus of the cecum and ascending colon if it can be reduced in time At the same time the appendicostomy fastens the movable colon to the abdominal wall It is useful also in case of volvulus of the sigmoid flexure when it has gradually developed and the intestine above is very full, also in ileus from paralysis in which the large intestine is extremely distended and can not be evacuated with high injections The outcome was favorable in 48 3 per cent of the 31 cases in which the intestine was emptied, and in 47 2 per cent of the 21 cases in which this was not done He adds that the main trouble is that patients do not reach the surgeon in time Better results will be recorded when physicians learn to diagnose strangulation ileus in time, and when they learn that an expectant attitude in case of ileus from occlusion increases the danger from day to day, and that many human lives are sacrificed to the teachings of internal medicine

68 **Diagnosis of Acute Mediastinal Affections**—In the case described by Arx a brakeman was thrown under a car and was injured in the heart region by being pushed along by one of the wheels The fourth left costal cartilage was fractured and the fourth intercostal branch of the internal mammary artery ruptured The blood escaped into the anterior mediastinum and into the left pleural cavity, but the pericardium did not seem to be injured. Large moist râles and crepitation were audible under the lower part of the sternum, and here only, later subsiding at this point, giving place to dulness, and appearing at a higher point, near the manubrium There was no emphysema and nothing to indicate injury of the air passages Arx ascribes this finding to the gradual development of the hematoma in the anterior mediastinum It pressed back the right half of the heart and thus brought it into a more vertical position, which caused the apex beat to be remarkably strong, coming concentrically direct from below instead of the usual tangential beat A third unusual symptom was a whistling sound audible at a distance and synchronous with the heart systole The chest wall vibrated to correspond with this sound, which was audible for about two hours and then vanished to recur again next day for an hour or so The patient rapidly recovered under expectant treatment, but there is still, a year later, a tendency to cough on exertion, with brief pain in the heart region and along the left margin of the sternum when he coughs or sneezes or lies on his side The whistling sound Arx explains as due to the concussion of the air in the trachea from the heart as a note is produced in an organ pipe

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72 (XXV No 3 pp 291-432.) Sclerosis of Uterine Arteries as Cause of Uncontrollable Hemorrhage (Sklerose der Art. der Gebärmutter) A. Solowij
73 Fetal Peritonitis and Consequent Malformations from Mechanical Pressure. (Fötale Perit. und Missbildung) E. G Orthmann
74 Cases of Paraurethral Suppuration. (Paraur Eiterung) O O Fellner
75 Chorioepithelioma (Chorioep) H E Klinge
76 Histologic Research on Uterine Sarcoma. esp Myosarcoma. (Uterussarkom etc.) G L. Basso
77 Pseudo-carcinomatous Infiltration of Intestinal Wall in Case of Adnexitis (Infiltr der Darmwand.) H Füth

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78 (LIV No 8 pp 353-400) Differential Diagnosis Between Reflex and Absolute Immovability of the Pupils (Pupillenstarre) L Bach
79 Proteolytic Leucocyte Ferment and Its Antiferment. (Prot. Leukozytenferment.) E Müller and H Kolaczek.
80 *Specific Solubility and Its Application in Forsenic Blood Tests (Spez Löslichkeit.) R Dehne.
81 *The Blood in Asthmatics (Blutuntersuchungen) P Salecker
82 *Impure Heart Sounds in Children. (Unreine Herztöne.) H Neumann
83 *Operative Treatment of Laryngeal Stenosis (Kehlkopfstenosen) Wendel
84 Appendicitis (Zur App Frage) K Garhammer
85 *Prophylaxis of Retention of Placenta (Plac Retention) S. Durlacher

86 *Treatment of Tetanus (Antitoxin bei Tetanus.) K. Urban
87 Radioactivity of Steben Chalybeate Waters (Steb Stahlquellen) F Hammer
88 Sled Frame for Baby Carriage. (Schlittengestell f. Kinderwagen.) Nerlich.
89 (No 9 pp 401-448) Heart Action too Weak to Send Pulse to Peripheral Arteries (Frustrane Herzkontraktion) H Hochhaus
90 *Study of Pancreatic Juice in Man and Quantitative Determination of Trypsin (Pankreassaft.) F Volhard.
91 *The Desmoid Test and the Connective Tissue Test. (Sahli's Desmoid probe und A Schmidts Bindegewebsprobe) J Lewinski.
92 *Intravital Coagulation and Thrombosis in the Vessels of Internal Organs After Ether and Chloroform Anesthesia (Gerinnungen und Thrombosen nach Narkosen) O Mulzer
93 *Modified Bier Treatment of Affections of Ear and Upper Air Passages (Stau und Saugtherapie in Ohr etc.) K. Vohsen Id O Muck.
94 *Experiences with General Anesthesia with Scopolamin Morphin Chloroform (Skop Morphin Chlor Narkosen.) Kreuter
95 *Advantages of Hydrogen Dioxid in Examination of Sputum (Auswurfsedimentierungsverfahren mit Wasserstoffsuperoxyd nach Sachs Müke) Peters
96 Metal and Celluloid Insoles for Flat Foot. (Plattfusseinlagen) K. Lengfellner
97 Transformation of Lengthwise Extension into Transverse Traction (Umsetzung von Längsext im queren Zug) A. Hofmann
98 Wire-Celluloid Bandage (Draht Zell Verband) O Heine
99 Nervous Eructation (Nerv Aufstossen) I Boas
100 Report of Bavarian Cancer Research Committee 1905 (Sammelforschung) K Kolb Commenced in No 8

80 **Specific Solubility in Forensic Blood Tests**—Dehne has been studying the phenomenon that specific turbidity and precipitates in a combination of serum and antiserum become rapidly dissolved when undiluted homologous serum is added in excess Even with mere traces of blood, the appearance of this specific solubility, testing with serums of various organs, points unerringly to the kind of animal from which the blood originally came

81 **The Blood in Asthma**—Salecker calls attention to the great fluctuations in the blood picture in cases of asthma During or immediately after the attack there is pronounced hyperleucocytosis, generally chiefly in the polymorphonuclears, which may increase to 80 per cent of the total number of leucocytes or even more The mononuclears, especially the eosinophiles, diminish materially in numbers, but conditions return to normal in the course of a few days He remarks that we are accustomed to see such violent reactions on the part of the blood only in consequence of bacterial or chemical irritation His communication is based on examination of 14 asthmatics, half of whom were examined during and immediately after an attack

82 **Impure Heart Sounds in Children**—Neumann reports several typical cases in which the children were apparently healthy, with nothing to call attention to the heart except the discovery of a lack of purity in the heart sounds He noticed this in his private practice in 71 children under 5 years, in 89 between 6 and 10, and in 20 older children This change in the character of the heart sounds came on suddenly, and he is inclined to think that it is permanent. Preceding catarrhal affections of the upper air passages is almost invariably mentioned in the history, and he thinks that involvement of the heart in infections of the upper air passages, especially of the nose, is so common that the heart should be supervised in all such cases Children with this anomaly in the heart sounds evidently have something more or less wrong with the heart Although slight cyanosis and shortness of breath are sometimes observed, as a rule there are no signs indicating disturbance beyond the one mentioned, and the children take cold baths and exercise violently—against the physician's advice—with apparent immunity It is evident, however, he thinks, that the heart is not intact, and that the life expectancy is more or less modified by it.

83 **Operative Treatment of Laryngeal Stenosis**—Wendel's patient fell on the edge of a chest and fractured the larynx with resulting cicatricial stenosis The cicatricial tissue was excised by laryngotomy and the mucosa was mobilized and drawn up to cover the defect, which extended half way around the larynx The outcome was excellent

85 **Prophylaxis of Retention of Placenta**—Durlacher is inclined to attribute retention of the placenta to reflex action from manipulation of the uterus or abdominal walls The best means to prevent it, therefore, he says, is to abstain from touching the uterus or abdomen after the child has been delivered Inspection and control of the pulse and the higher position of the uterus will reveal internal hemorrhage, generally in less than half an hour When this is observed Credé's method of expression can be applied He urges the adoption of this strictly expectant treatment on a wide scale in order to test its results In his experience it permitted spontaneous detachment and expulsion of the placenta even in cases in which at previous childbirths there had always been more or less trouble from this cause, requiring manual measures and accompanied by much hemorrhage.

86 **Antitoxin Treatment of Tetanus**—Urban reports two cases of tetanus in which death soon followed injection of antitoxin In a third case no benefit from the antitoxin was visible. As a last resort the compound fracture of the leg was rinsed with 1 per cent silver nitrate solution daily, commencing the tenth day of severe tetanus, the first symptoms were noticed the twentieth day after the accident The patient rapidly recovered

90 **Study of Pancreatic Juice and Determination of Trypsin**—Volhard introduces 200 c c of olive oil into the fasting stomach and in half an hour pumps it out again The oil induces copious secretion of pancreatic juice, and more or less of it finds its way into the stomach He describes a simple method with which he was able to determine the presence of active trypsin in the stomach contents in 86 per cent of 22 cases This allows excellent oversight of the functional capacity of the pancreas In one case the absolute absence of pancreatic juice in the stomach was explained by autopsy, which showed the pancreas completely transformed into connective tissue with the duct occluded by concrements The symptoms during life had been those of severe diabetes without acidosis

91 **Tests of Stomach Functioning**—Lewinski's experience does not indicate that Sahli's desmoid test has much value, as catgut does not behave in the stomach like the ordinary raw connective tissue This explains the occasional contradictory findings Schmidt's connective tissue test, however, has proved constantly reliable This is the ingestion of a certain amount of finely chopped raw meat, slightly browned in the oven Under normal conditions this is completely digested in the stomach not a trace of the connective tissue appearing in the feces If it passes through the stomach undigested, it is not attacked by the intestinal juices, and is found in the stools This was the basis on which Sahli developed his test, but catgut acts differently in the stomach from raw meat fibers

92 **Injurious Action of Ether and Chloroform on the Blood Vessels of Internal Organs**—Mulzer has experimented with 64 animals under general anesthesia and his findings sustain the assumption that ether and chloroform have a directly injurious action on the red corpuscles, dissolving them when long in contact When the anesthesia had been kept up for more than half an hour the vessels in the lungs, liver and kidneys were obstructed with disintegrated red corpuscles and thrombosis was evident at certain points These findings had no connection with the amount of the anesthetic administered nor the position of the animal Injection of ether or chloroform directly into a vein produced the same results as prolonged general anesthesia

93 **Suction Therapy for Affections of Ear and Upper Air Passages**—Vohsen has devised a simple means of influencing the nasal sinuses and evacuating morbid secretions It is based on the Bier method of aspiration with a cupping apparatus but no apparatus is required The benefits of the Bier aspiration treatment are the result of the alternation of compressed and rarefied air The same results can be accomplished Vohsen says in affections of the sinuses or middle ear by blowing into the nose which is held closed, and thus compressing the air in the sinuses, then aspirating out their contents with the mouth and throat muscles the glottis being closed The negative pressure that can be thus obtained is much higher than with any mechanical device to date Hyperemia is induced in the parts the sinus is emptied and the procedure can be repeated at will by the patient without harm Pr[illegible]

ing his throat as in the position of yawning and then aspirating out the air with the nose closed tight, he succeeded in drawing out part of an effusion in the middle ear The only possible drawback to this technic, he adds, is the possibility of conduction of the pressure to the middle ear, but this can be avoided with a little practice The method is not adapted to every case, of course, but when indicated will be found a great help Muck gives an illustration of a glass tube whose end fits tight in the ear The outer end carries a rubber bulb and its application for suction treatment of suppurative affections of the mucosa of the ear has given him uniformly and surprisingly good results He has applied this treatment in 20 cases of obstinate chronic affections, applying the instrument for one or two minutes, with one minute intervals, and keeping this up for 15 minutes on alternate days Healing was complete in every instance in from four to eight weeks The benefit from the mechanical removal of the secretions is supplemented by the induced hyperemia

94 **Scopolamin - Morphin - Chloroform Anesthesia.**—Kreuter writes from Graser's clinic at Erlangen to extol the advantages of this combined method of general anesthesia He asserts that the lack of danger as the dosage is so small, the small amount of the chloroform or ether required, and the reduction of secretion under the influence of the scopolamin, are not the least of its advantages He thinks that it may materially reduce the number of cases of postoperative pneumonia The only drawbacks of the method that he has discovered are the uncertainty of the action of the scopolamin and the subjective sensation of dryness He recommends the combination particularly for the long protracted operations, even for much debilitated patients, adding his testimony that "it is the most humane technic known to date"

95 **Hydrogen Dioxid as Aid for Examination of Sputum.**—Peters commends the addition of hydrogen dioxid to the sputum as a simple and most effectual means of breaking up tenacious masses and distributing the tubercle bacilli evenly through the specimen

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101 (LXI Nos 3-4 pp 201 388) Treatment of Advanced Laryngeal Tuberculosis (Larynxtub) A Those
2 Mechanical Stimulation of Secretion of Gastric Juice (Mech Erregbarkeit der Magensaftsekretion) A Schiff
Scleroma Its Importance in Army (Sklerom) J Fein
104 Paralysis of Recurrent Nerve on Functional Basis (Lähmung des Nervus rec.) R Landesberg
105 *Mixed Infection in Pulmonary Tuberculosis and Its Importance as Well as that of Intestinal Tuberculosis for Amyloid Degeneration (Mischinfektion bei Tub etc.) J Sorgo
106 Venous Murmurs in Interstitial Liver Affections (Venengeräusche bei der Interstit Hepatitis) G Catti
107 *Deviation of Complement in Diagnosis of Typhoid (Komplementablenkung in Typhusdiagnose) H Hirschfeld
108 *Laws Regulating Elimination of Sugar in Diabetes mellitus (Zuckerausscheidung beim Diab mell) W Falta and A Gigon.
109 *Trypsin in Treatment of Cancer (Trypsin—Pankreatin—bei Karzinom) E v Leyden and P Bergell
110 The Antiferments (Antiferm) A Schütze and P Bergell
111 Patency of Foramen ovale and Its Diagnostic Importance (Offen For ovale) J Ohm

105 **Amyloid Degeneration in Tuberculosis**—The researches reported by Sorgo, who is the medical chief of the great Alland sanatorium, demonstrate that amyloid degeneration in phthisis is always the result of mixed infection in case of a pulmonary process, or else is a sign of a tuberculous process in the intestines The practical conclusion follows that in case mixed infection can be excluded by examination of the sputum, the discovery of amyloid degeneration points to an existing tuberculous process in the intestines He gives the details of 49 patients examined from this point of view He found that 38 of the patients had no signs of mixed infection in the sputum

107 **Hemolytic Blood Test in Diagnosis of Typhoid.**—Hirschfeld has been studying the application of the deviation of complement as a test for the diagnosis of typhoid The serum used was that taken for the agglutination test, and in the 15 cases under observation the results of the test were constantly positive and gave positive findings much earlier than the agglutination test The findings proved strictly specific in his experience, and they ensured the diagnosis at an earlier date than was possible with the agglutination test It requires an expert, however, to make the test, as it would be too expensive, tedious and delicate for general practice, but the findings may prove of inestimable service in certain cases

108 **Laws of Elimination of Sugar in Diabetes**—Falta and Gigon state that their experience has confirmed that of others in respect to the difficulty diabetics encounter in the disposal of maltose These patients are much less able to tolerate maltose than levulose or any other carbohydrate The details of the metabolism in 8 cases are given in numerous tables, the metabolism studied from some new standpoints, emphasizing the "superposition curves," etc

109 **Trypsin in Treatment of Cancer**—In this communication from von Leyden's clinic, two laws regulating the growth of cancer are specially emphasized, namely, the fact that in its origin and growth carcinoma is a strictly local phenomenon, and that its most striking feature is its unlimited proliferating power It is also pointed out that the tumor reacts with increased growth to all kinds of injuries, mechanical, thermic and chemical For half a century medical science conducted its research on cancer almost exclusively along morphologic lines, but now the questions are Is there a specific production of substances in cancer? and Is it possible to induce a specific destruction of these substances? Research has shown that there is probably a production of a specific albumin in malignant tumors, and that this albumin is promptly digested by the ferment trypsin The experimental experiences with trypsin, so far reported, show that larger amounts of trypsin pass into the blood when it is given by the mouth than when it is injected subcutaneously Injected directly into a carcinoma in man, the results proved disappointing The resulting digestion of the cancer cells was always circumscribed and there was no question of a cure in any case Given internally, even for long periods and in large amounts, no decisive influence could be demonstrated in case of inaccessible internal carcinoma On the other hand, nearly every case of carcinoma of the stomach, not too far advanced and still free from metastases, exhibited an unmistakably favorable reaction to the trypsin The verdict from this clinic is thus, that trypsin to date, while displaying a curative influence can not yet be heralded as a definite method of treatment A new fact has been learned, however, possibly of far reaching importance, namely, that a tumor whose cells have been digested (dissolved) by the trypsin in some circumscribed area never reacts to this interference with increased growth, either locally or in general This fact recalls the selection in respect to injections of radioactive substances This exceptional absence of increased growth under the influence of the trypsin, von Leyden regards as significant, showing an actual specific destructive process even if it is only temporary

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them A selection from these volumes will be made for review as dictated by their merits or in the interest of our readers

TREATMENT OF SKIN CANCERS By W S Gotthell M D Adjunct Professor of Dermatology at the New York Postgraduate Medical School and Hospital Third Edition Revised and Enlarged Cloth. Pp 89 Price $1 00 New York Surgery Publishing Co 1907

COMMON BACTERIAL INFECTIONS OF THE DIGESTIVE TRACT and the Intoxications Arising From Them By C A. Herter M D Professor of Pharmacology and Therapeutics in Columbia University Cloth Pp 360 Price $1 50 net New York and London The Macmillan Co 1907

ATLAS AND EPITOME OF DISEASES OF CHILDREN By Dr R Hecker and Dr J Trumpp of the University of Munich Authorized Translation from the German Edited by Isaac A Abt, M D, Assistant Professor of Diseases of Children in Rush Medical College With 48 Colored Plates and 147 Illustrations Cloth Pp 453 Price $5 00 Philadelphia and London W B Saunders Co 1907

METABOLISM AND PRACTICAL MEDICINE. By Carl von Noorden Professor of the First University Medical Clinic Vienna. Anglo American Issue Under the Editorship of I Walker Hall Professor of Pathology University College, Bristol Vol I—The Physiology of Metabolism by Adolf Magnus Levy Berlin Cloth Pp 450 Price $4 00 net. Vol II—The Pathology of Metabolism by Carl von Noorden Fr Kraus Ad Schmidt W Weintraud M Matthes and H Strauss Cloth Pp 525 Price $6 00 net Chicago W T Keener & Co 1907

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Address

SOME RECENT STUDIES ON HEREDITY *

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For convenience of presentation we may speak of studies on heredity as having followed three principal lines of inquiry One of these, often known as the statistical or biometric method, includes the statistical treatment by precise mathematical methods of large masses of data obtained by the observation of heredity and variation as they occur under natural conditions With the results in this direction I shall in no way attempt to deal I will only recall that the most widely known of them is embodied in Francis Galton's so-called law of ancestral inheritance, which attempts to state the quantitative effect on the offspring of their entire ancestry, including not only the two parents, but also all the more remote progenitors

The second method is that of experiment, pre eminently by observing the operation of heredity in hybrid forms produced by crossing two different species races or breeds The importance of such experiments does not lie in the fact that they deal with hybrids as such It arises in the main from the practical consideration that when the parental forms differ visibly in one or more characters these can be more readily recognized, and hence more easily traced in the offspring than is the case with pure bred forms Apart from this there is every reason to believe that the operation of heredity in hybrids does not differ in any essential way from that in pure bred forms, and hence the former may be taken to indicate what takes place in the latter where the parental forms do not differ in any conspicuous way Probably the most important and certainly the best known, of the general results in this direction is the so called law of Mendel (or better the Mendelian principle) to which we shall presently return This principle is probably more complex and perhaps also of more limited application than was at first supposed, but no other phenomenon of heredity is of greater interest because it gives a new basis for a view of heredity as a whole

The third method is an indirect one which includes the attempt to determine and study in detail the physical basis of heredity in the germ cells It is especially this aspect of the subject that I shall endeavor in some degree to set forth but this can not be done successfully without holding clearly in view some of the more striking facts of Mendelian inheritance even though their brief review must run the risk of going over ground already very familiar

"UNIT CHARACTERS" AND HEREDITY

The most interesting of the specific results obtained by the experimental method relate to the so-called unit characters and their behavior in heredity The earlier observers thought of the hereditary organization on the whole in the way in which it is popularly regarded as a single and indivisible unit The result of the union of two such units in reproduction was conceived as producing a new unit which is, on the whole, a blend of the original two somewhat as two liquids of different color may mix to form a third liquid of blended color There are many hereditary qualities that do, in fact conform to this for instance, color and apparently also stature in man The cross between the white and negro produces mulattoes, which, in turn, produce mulatto children the two parental color characters having permanently blended But, as even the earlier observers perceived in some measure, there are other characters that show an entirely different behavior Such characters, which exhibit the phenomena of Mendelian inheritance and are often spoken of as "unit characters," do not ordinarily mix or blend, but behave almost as if they were separate material entities which may be put together and taken apart again like the cards of a pack or the separate pieces of a mosaic work A typical example is given by the cross between a common gray mouse and a white or albino mouse of the same extraction The hybrid thus produced does not show a mixture or blend of gray and white, as might be expected, but *appears* pure gray But the gray hybrid does not really lack the white character This character is only concealed or "dominated" by the gray for it may be recovered or "extracted" in the next generation If such gray hybrids be bred together their progeny always include in the long run both white and gray forms and the "extracted" whites thus obtained are not only pure white in appearance, but when paired together produce only white off-spring for an indefinite number of generations

Gray and white may, therefore, be put together in a hybrid and afterward taken apart again without visible modification of either color, except that when the two are associated in the hybrid gray always conceals or dominates white What is far more remarkable is the fact that gray and white mice issue from the gray hybrids in definite proportions there being in the long run three grays to one white This ratio does not often appear in a single litter of mice or in a few litters In a large number of litters taken collectively it is found to hold with remarkable accuracy—when several hundred such mice are bred even within a fraction of 1 per cent Clearly, then, the combination and dissociation of the two characters follows some definite law or principle which suggests that observed in chemical combination but is not directly to be compared with the latter since an element of chance is present and the result must be treated by the method of probabilities

The behavior of the white and gray unit character in mice is but an example of a phenomenon of wide occurrence in both plants and animals and [illegible]

* Lecture delivered before the Harvey Society Jan 27 1907

shown by a great variety of characters. A few examples of such characters in animals are the length, mode of growth and color of the hair in rabbits and guinea-pigs, the colors and mode of growth of the plumage and the structure of the comb in fowls, the color patterns of snails and butterflies, and even such apparently obscure characters as the color of the silk in the cocoons of silk-worms or the peculiar "waltzing" habit of the so called Japanese mice. Among plants examples are the shapes of leaves, seeds, pods or pollen grains, the color of the flowers, the structure of the seeds and color of the seed-coats, and the hairiness or smoothness of the leaf surface. All these characters (many others might be given) present cases in which, when two *contrasting or opposite* characters of the same type are crossed, one alone, known as the "dominant," is visible in the first hybrid, while the other is "recessive," and the offspring of the hybrids in the long run show the two characters in the ratio of three to one. Evidently, therefore, we are dealing with a phenomenon of such wide occurrence that it must represent some deeply lying principle of inheritance.

The results are even more remarkable when, instead of limiting the case to a single pair of characters, two or more pairs are taken together. It is then found, in typical cases, that each pair of characters follows the Mendelian rule quite independently of the characters with which it is associated. But when the combinations of the two (or more) pairs are considered together they are found to fall into definite series, which rapidly increase in complexity as the number of characters rises, but follow a simple and definite principle. At this point these more complex combinations need not be considered. The point on which I would fix attention is that the principle of combination is such that when the hereditary composition of the parents is known in respect to one, two or any number of pairs of characters, both the qualitative and the quantitative nature of their offspring may be predicted often with astonishing accuracy. It has thus, in fact, become possible to write down hereditary formulas for animals and plants that exhibit this form of heredity which will express both their ancestry and their hereditary capacity. These formulas bear a curious resemblance to those of organic chemistry in that they have enabled the experimenter to predict the formation of new combinations not previously known, and then to create them by a suitable synthesis. Further, just as the chemist can in some measure predict the properties of his new compounds, so the biologic experimenter can in a measure predict the hereditary behavior of the new combinations thus called into existence.

CUÉNOT'S EXPERIMENTS

I will again illustrate this by color inheritance in mice, describing a case which the French observer Cuénot first worked out on paper and afterward put to the test of actual experiment. The colors of mice are typical Mendelian "unit characters," so related that when two colors are united in a hybrid yellow dominates gray or black, gray dominates black, while any of these colors dominates the corresponding albino, or white character. The nature of Cuénot's experiment is shown in Table 1. A first cross was made between two white mice, one an albino of gray extraction (AG), the other an albino of black extraction (AB). The result is a white mouse of combined gray and black extraction (AGAB). Parallel to this, a cross was made between a pure black mouse (CB) and a white mouse of yellow extraction (AY), the result of which is a yellow mouse that has both black and white in its ancestry (CBAY). From a knowledge of the hereditary constitution of the two mice AGAB and CBAY Cuénot predicted that they would produce eight different kinds of offspring, of which in the long run four should be white, two yellow, one black and one gray. Crosses of this type were then repeatedly performed until 151 mice of the third generation had been obtained. The actual distribution of the colors is shown in one column (Table 1), the theoretic expectation in the other, and, although the correspondence is not mathematically exact, it is so close as to leave no doubt of the correctness of the reasoning on which the prediction was based. The experiment might have been indefinitely continued by crossing any two of the eight kinds of mice thus obtained, and in each case a close prediction could have been made of the result. This is by no means an isolated case, but only a single example of a type of experiment that has been repeatedly performed, both in animals and in plants, with quite as striking a correspondence between theoretic expectation and reality. In general, the larger the number of cases observed the closer does this correspondence become.

TABLE 1.—HEREDITY OF COLOR IN MICE. (Cuénot.)

Grand parents (1st generation)	A G (white) A B (white)		C B (black) A Y (yellow)	
Parents (2d generation)	A G A B (white)		C B A Y (yellow)	
			(Calculated)	(Observed)
Offspring (3d generation)	1 A G C B	(gray)	19	16
	2 A B C B	(black)	19	20
	2 A G A Y, 4 A G A B, 5 A B A Y, 6 A B A B	(white)	76	81
	7 C Y A G, 8 C Y A B	(yellow)	38	34
			152	151

Mendel's law or principle gives an extremely simple and lucid explanation of the seeming necromancy that is practiced in such predictions. This principle is simply that when a given pair of opposing or alternative characters (i. e., such as behave toward each other as dominant and recessive) are put together in a hybrid they are, in some sense, disjoined or separated in the eggs or spermatozoa of the hybrid, and in such a manner that half the germ cells in each sex contain the dominant character and half the recessive. In other words, the germ cells of the hybrid are no longer hybrid, but are pure like the parental forms. If now it be assumed that fertilization is quite fortuitous—that is, that the spermatozoon that fertilizes any particular egg is as likely to bear one character as the other—the observed facts follow as a simple matter of probability, and the explanation of the simple ratio shown by a single pair of characters carries with it that of the more complex series shown by the combination of two or more pairs of characters. To illustrate again by the mice. The gray and white cross produces the hybrid GW, which appears gray because of the dominance of gray over white. The eggs and spermatozoa of the hybrids are, however, not GW, but either G or W in equal numbers. If now the *spermatozoa* fertilize the eggs at random the probability is that the following combinations will appear in equal numbers: GG, GW, WG and WW or GG + 2GW + WW as shown in Table 2. The first produces a pure gray mouse, the second and third, hybrid gray mice, and the fourth a pure white mouse, that is, three gray to one white. The correctness of this interpretation is proved by crossing the gray hybrids (GW) with the pure white forms (WW). Whether the gray female be paired with the white male or the reverse, the result should be to give gray hybrids (GW) and pure whites (WW) in equal numbers. For the germ cells of the gray hybrid are gray

and white in equal numbers, while those of the whites are white only The chances, therefore, are equal in favor of W meeting W or G, as shown in Table 3 This expectation is closely met by the facts It is simply by the application of this essential principle—disjunction of the members of each pair of characters and the resulting "purity" of the germ cells—to the combinations of two or more pairs of characters that the experimenter is enabled to make his apparently marvelous predictions regarding the quality and quantity of the offspring As has just been shown, the combination of one pair of characters gives four combinations that form a series of three terms (since the second and third combinations are identical) If two pairs of characters (which may be called Aa and Bb, the capital letter denoting in each case the dominant character) be taken together, their combinations will appear in a series formed by the simple arithmetical combination of the two series formed by each pair alone That is, if each term of the simple series AA + 2Aa + aa be combined with each term of the series BB + 2Bb + bb the result is sixteen combinations, which (owing to the identity of certain ones) fall into a series of nine terms of the form ABAB + AbAb + aBaB + abab + 2ABAb + 2aBab + 2ABab + 2Abab + 4ABab Some of these combinations are not externally distinguishable by the eye but must be tested by the nature of their offspring For example, ABAB is not visibly different from ABab since both show only the dominant characters, A and B, but they differ in hereditary capacity, since one can transmit only the two dominants, while the other may transmit also the two recessives, a and b This difference is readily tested by breeding experiments Inspection of the nine-term series will show that out of the sixteen combinations nine show both the dominant characters, A and B, three, one dominant and one recessive, A and b, three, the other dominant and recessive, a and B, and one, both recessives, a and b Experiment shows that the four characters actually appear in combinations that closely approximate to the series thus worked out as a purely arithmetical construction With three pairs of characters the nine-term series expands to one of twenty-seven terms, with four pairs to eighty-one terms, and so on It is not necessary to follow all this out in further detail It is sufficient to say that, given an experimental acquaintance with the relations of dominance and recessiveness between the characters, the predictions of the experimenter become a simple matter of mathematical computation

TABLE 2.

Eggs G or W

Spermatozoa G or W

GG + GW + WG + WW

or GG + 2GW + WW

3G to 1W

TABLE 3

Eggs G or W

Spermatozoa W or W

WG + WW + WG + WW

or 2GW + 2WW

or

Eggs W or W

Spermatozoa W or G

WW + WW + GW + GW

or 2WW + 2GW

Such is the Mendelian principle stated in its simplest form and as it was conceived by Mendel himself It has now become evident that as applied to certain cases (among which is included color inheritance in mice as will appear beyond) Mendel's own statement was probably too simple and further that many exceptions and modifications occur I will return to this further on but for a presentation of the cytologic aspects of the problem it will be convenient to confine ourselves at the start to the simplest form of statement

THE GERM CELL AND HEREDITY

We may now turn to investigations on the structure and behavior of the cell that have revealed a mechanism that may be adequate for the physical explanation of the main facts of Mendelian heredity It has now become the prevailing view (though it is not universally admitted) that the primary factors of heredity—I do not say the only ones—are contained in the nuclei of the germ cells, and on this assumption we shall proceed without reviewing the great array of evidence on which it rests In approaching this subject we may again recall the fact that the unit characters behave in Mendelian inheritance almost as if they were material bodies that may be put together, separated and recombined in definite proportions This remarkable fact would be intelligible if the material bases of the characters in the germ cells were separate substances or bodies that underwent corresponding combinations, dissociations and recombinations The cytologist has good reason, therefore, to seek in the egg, or spermatozoon, and particularly in the nuclei of these cells, for discrete bodies that may serve as such bases of the characters

THE CHROMOSOMES AND "UNIT CHARACTERS"

Whether this search has been successful or not is still a matter of opinion, but it is not a matter of opinion, but of fact, that the nuclei of the germ cells do contain or give rise to bodies, the history of which in the life cycle of the organism shows the closest parallel to that of the unit characters—so close that we can, in fact, apply to these bodies the same formulas by which the characters are designated and reach the same result These are the bodies known to every histologist as the chromosomes—rod-shaped or loop-shaped bodies that are visible in the nuclei of the egg and spermatozoon at the time of fertilization and at the time of cell division in every cell derived from the fertilized egg The chromosomes are constant in number in each species At the first division of the egg and at each subsequent division each of them divides into two, the daughter chromosomes thus formed separating and passing one into each of the daughter cells The chromosomes are thus handed on by division from cell to cell throughout development, always retaining their specific character, and hence we are justified in the conclusion that the chromosomes of every cell throughout the whole life cycle may be regarded as the lineal representatives, if not the actual descendants, of those present in the original fertilized egg

Let us now briefly consider some of the characteristics of these bodies It was formerly supposed that the chromosomes in a given species were all alike, both in structure and in physiologic quality but we are now able to say definitely that this view was erroneous at least in some measure In many species the chromosomes show constant differences of size so that certain ones may be recognized by the eye in many successive generations of cells With these individual differences of size are correlated in some cases characteristic differences of individual behavior at certain periods of the life cycle It has been shown experimentally that when fal[illegible] combination of chromosomes are artificially produced (for instance by double fertilizing of the egg) fal[illegible] [illegible] of [illegible] ment take place in the offspring [illegible] and similar facts have led to the [illegible] chromosomes of the same nucle[illegible]

ologic characters, playing different rôles in the metabolism of the cell and hence in development It is but a step from this result to the conclusion that the primary factors of heredity (which, as we have seen, are believed to have their seat in the nucleus) are in some fashion distributed among the chromosomes It must be admitted that we have as yet but little direct and specific evidence that such is actually the case The principal argument is part of a more general one that the basis of heredity is contained in the nucleus, and that the chromosomes form the most essential part of the nuclear substance

THE RELATION OF SEX TO THE CHROMOSOMES

But there is one interesting fact that bears directly on this question It has recently been found that in some of the insects there is a particular chromosome (known as the "odd" or "accessory" chromosome), distinguishable from the others by its size and mode of behavior, that is in some way related to the character of sex, for all the other chromosomes are paired in both sexes, while this particular one is single in the male, but in the female is accompanied by another similar chromosome The precise nature of the connection between this chromosome, or pair of chromosomes, and the sexual characters is not yet known, but it is difficult to escape the conclusion that it has to do in some way with the transmission and development of those characters If this be correct, we have a definite basis for the assumption, by analogy, that other chromosomes are concerned with the transmission and development of other characters [1]

COMPOSITION OF THE CHROMOSOME GROUPS

We may now examine the general composition of the chromosome groups more in detail One of the most striking discoveries of cytology is the fact that every nucleus contains a double series of chromosomes, that is, two series of chromosomes in duplicate The fact has already been referred to that the chromosomes often show constant size differences In all cases in which these differences are clearly marked it may be seen that there are always two of a kind, so that the chromosomes may be paired off two by two according to their size, in other words, if the chromosomes be arranged in the order of their size it is found that they fall into two similar series, the members of which correspond each to each This fact has not as yet been shown clearly in the cells of higher animals, but it appears unmistakably in the cells of certain lower ones, such as the insects Nevertheless, there is strong reason to believe that, even when the fact is not evident to the eye, the chromosomes of all cells, with certain special exceptions that only emphasize the rule, form two such duplicate series The confidence with which we may draw this conclusion rests on the manner in which the two series are known to be produced

Both observation and experiment have shown with great clearness that the explanation of the double series of chromosomes lies in the fact that they are descendants or representatives of two series that are originally brought together in the fertilization of the egg Now these two original series are derived from the nucleus of the egg and of the spermatozoon, respectively, and hence are ultimately of maternal and paternal origin Since every chromosome divides into two at the first division of the egg, and at every subsequent division, the two daughter chromosomes in every case passing, respectively, to the two daughter cells, it follows that the chromosomes of all the cell nuclei are of maternal and paternal descent in equal numbers

This conclusion, first reached by pure observation, has received a most convincing confirmation by means of experiment For example, Moenkhaus was able to effect a cross between two species of fishes, *Fundulus* and *Menidia*, that agree in the number of chromosomes (approximately 36), but differ markedly in respect to their size, the chromosomes of *Fundulus* being nearly three times the size of those of *Menidia* The resulting hybrids were reared up to a well-advanced stage of development (though not to the adult condition), and at every stage the two forms of chromosomes could be recognized—half (18) of the *Fundulus* type and half of the *Menidia* type —and with such clearness that the difference was distinctly shown in photographs Similar results have been obtained in a few other cases, though none are as striking as the one described

It may, therefore, be taken as at least highly probable, if not fully established, that every nucleus of an organism of sexual origin is a dual one and contains representatives of the original maternal and paternal chromosomes in equal numbers It is evident that we may have here a general basis for the facts of dual inheritance from the two parents But our conclusion may be pushed much further than this The pairing of the chromosomes according to their size can apparently mean nothing else than that one member of each pair is a maternal representative, the other a paternal, that is, that every chromosome derived from the egg is accompanied by a corresponding or duplicate one derived from the spermatozoon If, then, we have any right to assume that the chromosomes differ specifically in their relation to heredity, if we may assume that each chromosome stands in some way for a particular character or group of characters, then the further assumption seems justified that each such character or group of characters has a double basis or determinant, one derived from each of the parents On the basis of these assumptions may be worked out at least a partial explanation of Mendelian inheritance, as was first shown by Sutton and Boveri

RELATION OF THE MENDELIAN PRINCIPLE TO CHROMOSOME CHARACTERISTICS

Let us consider the case of an organism having eight chromosomes In the fertilization of the egg half these chromosomes, which may be designated as A, B, C and D, are derived from the nucleus of the egg, while the spermatozoon supplies four corresponding ones that may be designated as a, b, c and d The fertilized egg accordingly contains the double series A, B, C, D, a, b, c and d Since at every division of the egg and its descendants each of these chromosomes also divides, all the cells derived from the egg contain a double series identical with that present in the original fertilized egg, and, as in the egg, they form four pairs, A and a, B and b, C and c, D and d, each consisting of a maternal and a paternal member This mode of development continues throughout the whole life of the organism up to a period that shortly precedes the final ripening of the germ cells that are to produce a new generation At the beginning of this period, known as the maturation period, a process, known as synapsis, takes place, in the course of which the chromosomes unite two by two, coupling or pairing so as to form double chromosomes, known as bivalents As a result of this process the double series of single

1 It has been shown that the odd chromosome is present in one half of the spermatozoa and lacking in the other half and the facts seem to leave no escape from the conclusion that spermatozoa in which it is present produce females those in which it is lacking males

chromosomes present before synapsis gives place to a series of double chromosomes or bivalents, the number of which is, of course one-half the original number of single chromosomes The remarkable feature of the synapsis is that it is effected by a coupling or pairing of chromosomes that correspond in size, and for the reasons already given this must mean that synapsis involves the coupling of corresponding paternal and maternal chromosomes (as was first pointed out by the American cytologist Montgomery) Reverting to our graphic formulas, in synapsis the eight chromosomes A, B C, D, a, b, c, d, couple to form the four bivalents A-a, B-b, C-c and D-d Before synapsis takes place the paternal and maternal chromosomes show no regular or constant relation to one another in the nucleus After synapsis an orderly regrouping has taken place, each chromosome of maternal descent having paired with its mate or fellow of paternal descent This process is followed by a long period of growth, in both sexes in the course of which the germ cells prepare for the final act of their maturation This consists of two rapidly succeeding cell divisions, which in the female lead to the formation of two polar bodies and in the male to the production of four spermatozoa In one of these divisions, known as the reduction division, each bivalent separates into its two constituent chromosomes one of which passes to each of the daughter cells It thus comes to pass (and this is the essential point) that after the reduction-division has occurred, half the resulting cells contain one member of each original pair and half contain the other member This disjunction of each member of a pair from its mate or fellow evidently forms an exact parallel to the disjunction of each dominant character from the corresponding recessive in Mendelian heredity

It is further clear that owing to the reduction-division, each of the germ cells receives only a single series of chromosomes and hence only half the original number The particular combination of chromosomes in the reduced series will depend on the manner in which the bivalents divide with respect to one another If they are all placed in the same position (as in Table 4) the re-

TABLE 4

$$\begin{matrix} A & B & C & D \\ a & b & c & d \end{matrix} \left\{ \begin{matrix} A & B & C & D \\ \\ a & b & c & d \end{matrix} \right.$$

sult will be to divide the double series into the original paternal and maternal ones, A, B, C D and a, b, c, d The cytologic facts do not in themselves give any direct evidence on this point but we are led by the facts of inheritance to assume that such a mode of division is unusual, though it may take place It is assumed, rather, that each bivalent divides independently of the others as shown in Table 5 so that any combina-

TABLE 5

$$\begin{matrix} A & b & C & d \\ a & B & c & D \end{matrix} \left\{ \begin{matrix} A & b & C & d \\ \\ a & B & c & D \end{matrix} \right.$$

$$\begin{matrix} a & b & C & D \\ A & B & c & d \end{matrix} \left\{ \begin{matrix} a & b & C & D \\ \\ A & B & c & d \end{matrix} \right.$$

tion of the original paternal and maternal chromosomes may be produced so long as the complete series A or (a) to D or (d) is maintained for example, A b C d a B, C d a b C d A, b c d a b c d and so on It is evident that the chance combinations of four chromosomes will be the same as those of four characters and similarly with a greater number

Now, it is too evident to need explanation that all this runs parallel in the most exact and detailed way to the behavior of the unit characters in Mendelian heredity Just as two corresponding characters (such as two colors) of maternal and paternal origin are associated in a hybrid and as they are disjoined in the formation of the germ cells so two corresponding chromosomes of maternal and paternal origin respectively are associated in the offspring and are disjoined in the reduction-division so that half of the germ cells receive one and half the other And, again, just as each pair of characters is independent of the others appearing in all possible combinations with them so we may assume that each pair of chromosomes divides without reference to the others and all possible combinations of them (within the limits of the series) appear in the germ cells following the same law of combination as the characters If we consider a single pair of chromosomes, A and a half the germ cells in each sex receive A and half a Fertilization according to the law of chances, gives the combinations A A A a a A and aa in equal numbers which equals AA + 2 Aa + aa or three fertilized eggs containing A (pure or combined with a) to one that contains a only This is of course the Mendelian ratio and equally well expresses the behavior of the gray and white characters in mice if instead of A and a we write G and W It is self-evident that the combinations of two or more pairs of chromosomes will be identical with those of two or more pairs of characters giving with two pairs a series of nine terms with three pairs twenty-seven terms with four pairs eighty-one terms and so on

We have, therefore only to assume that in heredity corresponding chromosomes stand for or are the physical bases of corresponding characters to find a fundamental explanation of Mendelian inheritance and one that is so simple and lucid as to make a singularly strong appeal to our credence

Had we no other evidence than the fact of the parallelism between the behavior of the chromosomes and that of the unit characters we should be justified in setting up the working hypothesis that the chromosomes play a leading role in heredity but in point of fact there is a great body of independent evidence pointing toward the same conclusion as I have already indicated Nevertheless we should clearly recognize that the interpretation can not as yet lay claim to be taken as a demonstrated theory It is still a working hypothesis only and one whose elements differ considerably in degree of validity The union of two similar series of chromosomes maternal and paternal in the fertilization of the egg is thoroughly established It may be taken as highly probable that the double series of chromosomes present in the cells of later stages are lineal representatives of the two original series —whether their actual descendants can not be so positively asserted The pairing of the corresponding chromosomes in synapsis and their subsequent disjunction in the reduction division seems to be well established in certain cases but whether that is always so is an open question that is now undergoing close scrutiny by cytologists The fundamental assumption that corresponding chromosomes bear or stand for corresponding characters is still a pure hypothesis though one in favor of which a strong argument can be made independently of the facts of Mendelian heredity

Space will not allow of a more critical examination of these cytologic questions I will only refer briefly to the interpretation that the chromosome hypothesis has to offer of certain exceptional or difficult cases including non Mendelian heredity The most familiar of these

phenomena is that of blended inheritance, such as the cross between the negro and the white man, which produces a yellow or brown type of uniform color which does not break up in the succeeding generation into black and white It is possible that in such cases the chromosomes that couple in synapsis completely fuse to form true hybrid chromosomes It is equally possible that without actually fusing in synapsis they become so long and intimately associated as to undergo mutual modification of their substance that brings about the same result

Many cases have recently been brought to light of partial or imperfect dominance, in poultry, for instance, as has been shown by English and American experimenters, white plumage usually dominates over colored, yet the hybrids often show more or less of an admixture of the colored type, and a similar result has been reached in the case of crosses between crested and non-crested fowls When such partial or diminished dominance occurs in the first hybrids it is easily explained by the supposition that one chromosome does not completely inhibit the activity of the other To explain the results in later generations this will not suffice, and we must assume, as in the case of true blended inheritance, that, either during synapsis or during the long period of association that precedes, the chromosomes permanently affect one another so as no longer to be pure

An apparent difficulty presented by the hybrid mice and by parallel phenomena in the case of hybrid sweet peas and stocks has, on further study, proved to be perfectly explicable by the Mendelian principle, and at the same time throws an interesting light on certain phenomena of reversion and atavism In case of the mice, albinos that have been mixed with colored forms and again "extracted" may have acquired the power to transmit that color to their descendants when crossed with mice of certain other colors, yet under the original Mendelian assumption they should be pure Cuénot has ingeniously explained this by the hypothesis that the production of color requires two factors, which we may call the "color producer" (C) and the "color determiner" (G B Y, etc) The colored gray mouse contains both these factors (C G), the corresponding albino contains the grey determiner (G), but the color producer is absent (hence A G) If these two factors be assumed to couple and disjoin like any other pair of Mendelian characters, the behavior of the albino mice is explained by Mendel's principle Thus, the appearance of gray depends on the presence of both the color determiner (G) and a color producer (C) The gray mouse possesses both these factors (C G) A mouse in which G is present but C absent (A G) is white or albino, but if such a white mouse be crossed with a black mouse (C B) the offspring will be gray (A G C B) thus "reverting" to a gray ancestor, because the introduction of the factor C enables the color to develop, but gray alone appears because this color is dominant to black Here the hybrid mice appear to "revert" to a gray ancestor, from which the albino was descended That this explanation is correct in principle is proved by the accuracy of the predictions that it renders possible, as in the more complex example heretofore considered A similar explanation is applied by Bateson to explain the behavior of certain white varieties of sweet peas and stocks, which breed true so long as each variety is paired with itself only but immediately produce purple flowers when the two white varieties are crossed Each of the white varieties is assumed to possess but one of the two-color factors, hence no color develops Their union by crossing brings the two necessary factors together and the color at once appears In this case, too, there is reason to believe that the wild ancestral form was colored The white varieties represent forms in which one or other of the color factors has been lost When the two are again united by crossing the hybrids "revert" to the ancestral type, i e, exhibit a form of atavism It should be pointed out, however, that this ingenious and plausible hypothesis seems to fail as applied to piebald or spotted forms, for which only a partial explanation has thus far been found

I will only mention one other departure from the typical Mendelian phenomenon for which the chromosome theory may give a physical explanation It is not uncommon to find that the combinations of two or more characters do not follow the simple arithmetical series expected on the law of equal chances, certain combinations being in excess and others correspondingly deficient This is clearly due to a tendency, more or less definite in different cases, for certain characters to "couple" or accompany each other—either constantly or in a marked majority of cases In sweet peas, for example, Bateson has shown that there is a marked tendency for round pollen grains to be coupled with red flowers and long pollen grains with purple In some of the moths, again, in some kinds of crosses certain of the characters of one parent always or usually appear in the male, others in the female, that is, there is a coupling, complete or incomplete, of these characters with the sexual characters A close parallel to these phenomena has been found in a corresponding coupling of the chromosomes, which tend to cohere in a definite way that can actually be followed out under the microscope We do not yet know whether such chromosome coupling is really the explanation of the character coupling for the two phenomena have not yet been worked out in connection with each other in the same species But no one can deny that the one phenomenon seems well calculated to explain the other, and we may here possibly be able to find a decisive test of the whole chromosome theory

Time will not admit of our following out these problems more in detail I would not give the impression that they have been completely solved For some of these problems not even an approximate explanation has been found But I hope I have been able to show that the cytologic study of heredity is not a vague search after intangible and obscure things, but is engaged with clearly marked, definite phenomena that can be as accurately studied as the phenomena of heredity, to which they run so closely parallel We should not make too ambitious a claim for the results already attained It is possible that we are on a wrong track and are dealing with only a complex and detailed coincidence I repeat that we are not dealing with a fully grounded or well established theory, but only with a working hypothesis But even so regarded, it is one of the most interesting and suggestive attempts to solve a complex and difficult problem that modern biology can show and as such it merits, I believe, the most attentive further examination

THE BEARING OF CYTOLOGIC STUDY ON OTHER SUBJECTS

It may be asked in what way the conclusions I have endeavored to outline may offer specific suggestion to the physiologist, the pathologist or the physician I fear no very satisfactory reply can as yet be given Still, it may not be amiss to say that if there be any considerable measure of truth in the conclusions I have indicated the day has gone by when the physiologist could allow himself to consider the relation between nucleus and cell

body as the simple reaction of two simple cell organs He must squarely face the probability that the nucleus is itself a complex organism, as he must also admit that the cell body consists not of one protoplasm but of many protoplasms Cytologists are laboriously endeavoring to ascertain in what measure the chromosomes are qualitatively different in respect to the processes of growth and differentiation If such qualitative differences are definitely proved to exist, a new and great field will be opened in cellular physiology and pathology Already attempts have been made to bring the facts of tumor formation and the like into relation with disturbances in the chromosome groups I have stated that false combinations of chromosomes have been experimentally shown to lead to false forms of development So far as I am aware, attempts to find a similar explanation of perverted growths in the body have thus far been without positive results, though some interesting suggestions in this direction have been offered But it should not be forgotten that in nuclei which show little or no visible differentiation of the chromosomes profound changes might take place without giving visible sign of their presence Such changes might be immediately induced by any one of many conceivable causes— by parasites, perverted forms of metabolism the presence of specific forms of toxins and so on—and having once arisen might persist for an indefinite number of cell generations long after the initial exciting cause had passed away It is still an open question whether the cell is able to regulate the character of the chromosome groups after disturbance but on the whole such evidence as we have lies on the negative side of the question Certainly there is nothing more surprising than the stubbornness with which abnormalities in the chromosome groups, when once they have arisen are perpetuated generation after generation so long as they do not lead to multipolar division Such an abnormality once arisen even in a single epithelial cell might therefore lead to an extensive pathologic growth of definite histologic character, in which we might seek in vain for a visible causative agent. I fear however that cytology is not yet in a position to bring much help to the pathologist, for we are still too ignorant of the mechanism of normal differentiation to have much to say about that of abnormal forms It is my impression that this problem can not at present be successfully attacked in the case of the higher animals and that we must for a time be content to rely on the study of much lower ones, such as the insects where for some unexplained reason the differentiation of the chromosomes is far more clearly shown

In conclusion I wish to repeat that whether we are on the right track or not in these cytologic studies they stand on a perfectly concrete definite and intelligible basis and can be put to the test of observation and experiment The facts of heredity have always stood among the most wonderful and apparently mysterious phenomena of organic nature It is no wonder if they long seemed inexplicable and if some naturalists have regarded, perhaps still regard, the hope of discovering their mechanism in detail as chimerical To-day I believe this attitude can only be taken by those who have not closely followed the remarkable lines of inquiry that I have endeavored to sketch

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Naming of Carbon Compounds—Thiol Thi—ol is a sulphur alcohol These are compounds in which the oxygen of the alcohol group is replaced by sulphur thus ethane thiol is CH_3CH_2SH—*Pharm Rev*, September 1906

Original Articles

BACTERIOLOGY OF THE RESPIRATORY TRACT,

WITH ESPECIAL REFERENCE TO INFLUENZA BACILLI *

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INTRODUCTION

These studies were carried on with a view of determining the frequency of occurrence of influenza-like bacteria in the sputa and throats of persons afflicted with the various infectious diseases and also of comparing such bacilli for the purpose of determining possible variations which might lead to a subdivision of the influenza group In a previous paper[1] on the bacteriology of whooping cough I discussed the occurrence of these bacilli in this disease and also gave some data on their occurrence in other infections Here I shall refer to some of these results and add to them further data on certain properties of these bacilli

TECHNIC

The technic used in examining the respiratory tract for bacteria was briefly as follows In nearly all of the cases sputum was obtained in a sterile Petri dish, and as soon as possible brought to the laboratory and examined In some cases it was impossible to obtain the sputum and throat swabs were used The sputum, as a rule, was washed in several changes of sterile water or broth and from this washed sputum smears were made and also a small particle was shaken thoroughly in a tube of plain broth for plating The washing was for the purpose of removing the ever-present saprophytes coming from the oral cavity as the sputum is expectorated Inoculations were then made from the tube of plain broth into melted plain agar at a temperature of 40 to 42 C, to which about 5 drops of pigeon blood had been added, and this was plated in the usual manner Pigeon blood was used because it was found that, as a rule, the influenza organisms grow better on this than on other bloods, a fact first noted by Pfeiffer

WHOOPING COUGH

In sixty-eight cases of whooping cough, influenza-like bacilli were isolated sixty-one times In the remaining seven cases they were not found after several examinations Usually they were found in the first examination, this being true in forty-eight of the sixty-eight cases In two cases the organisms were found several days before the whoop occurred, but at this time the patients had a severe cough and expectorated much mucus Examination in six cases during the early stages before the whoops began failed to reveal the organisms Later when the spasms appeared the bacilli were found They may remain in the throat for a considerable period of time even after the spasms disappear During the paroxysms they are coughed into the surrounding air in large numbers as may be shown by holding blood agar plates before the child while coughing In some cases the bacilli are extremely numerous and on the plates are in almost pure culture while in other cases they are relatively few in the culture In the negative cases where opportunity was offered [illegible] search both by smear and culture failed to [illegible] organism In one of these cases [illegible]

[illegible]

catarrhalis was found in nearly pure culture, in several others streptococci were especially numerous

It is sometimes true that in the early spasmodic stage the influenza-like bacilli can not be found, and later they may appear suddenly in large numbers In two cases this fact was especially conspicuous Both were in the third week of the disease and had very violent spasms of coughing with typical whoops Several examinations of sputum at intervals of two or three days both by smear and culture failed to show any of the bacilli, but many streptococci Suddenly the bacilli appeared in the sputum in large numbers and thus continued

Smears made from the washed sputum and stained by Gram's method with counterstain of dilute carbol-fuchsin show, as a rule, a large number of the small non-Gram-staining influenza-like bacilli This is not an absolutely reliable means of detecting them, one may become very suspicious of their presence by smear examination, but further confirmation should be made by means of culture

Pneumococci were found in every specimen and were about in the same proportion as in normal throats Under this term are included those colonies which appear in the plates with a greenish halo about them Streptococci were found in nearly every specimen of sputum examined In a number of cases this group of organisms was very abundant and even more numerous than those of the pneumococcus group As a rule, they were few, not more than three or four colonies on a plate Compared with the normal, this class of organisms was somewhat more prevalent The *Micrococcus catarrhalis* was found in large numbers in some of the cases, and organisms belonging to the diphtheria group were found in eight instances Several strains were given to Miss Hamilton, for identification, who found some of them to be true diphtheria bacilli and other strains to be pseudo forms, they were never found in large numbers In one case a child had a typical case of whooping cough with no evidence of diphtheria A swab obtained from the throat showed numerous influenza organisms, but no diphtheria bacilli in smear or blood agar plates Five days later the patient appeared with a well-developed membrane showing on examination many typical diphtheria bacilli together with some influenza bacilli

MEASLES

Twenty-three cases of measles were examined, in nearly all of which sputum was obtained for this purpose They were examined during the stage of eruption and had, as a rule, the cough so frequently present early in this disease In thirteen of these cases the influenza bacilli were isolated, in four they were the predominating organism, being found in almost pure culture in washed sputum In some of the other cases they were very few Pneumococci were always present and about to the same extent as found in normal throats Streptococci were numerous in a few cases but, as a rule, much less so than pneumococci The *Micrococcus catarrhalis* was found in ten cases, in two of these it was very abundant, being more numerous than any other organism present Influenza bacilli were not present in these two cases Typical diphtheria bacilli whose colonies possessed wide hemolytic zones were obtained in two cases, they were not numerous Five of the cases were complicated with otitis media In one of these cases only were influenza bacilli found in the discharge, they were present in very large numbers and in nearly pure culture, a few streptococcus colonies appearing with them About ten days previous to this, examination of the sputum showed the presence of influenza bacilli in considerable numbers Another examination of the ear discharge was made eleven days later At this time the influenza bacilli were no longer present, but there was obtained, in almost pure culture, a diphtheria-like organism In a second case a double otitis media developed, and in culture from the ear discharge were found numerous streptococci, a few diphtheria bacilli, a few staphylococci and also a few typical pneumococci which fermented inulin and gave a green colony on blood agar From the other three cases of otitis media streptococci were obtained pure in one of them, and diphtheria bacilli mixed in the remaining two One of the cases of measles during convalescence had a profuse nasal discharge Cultures of this material showed pneumococci, streptococci, a few diphtheria bacilli and also influenza-like bacilli About a week later there developed a pus infection of the upper lip extending into the left cheek Both smears and cultures from the pus showed a pure growth of *Staphylococcus pyogenes aureus*

These results show the large number of varieties of bacteria that may be found in such cases Streptococci seem to be the most frequent invaders, but the lesions can not be attributed to any one specific organism The tissues appear to be so non-resistant that any variety that may happen to be present in the upper respiratory passages may find therein a suitable place for growth

VARICELLA

Eleven cases of varicella in young children were examined Some of them were in the early stages, others later in the disease Practically all had a slight cough Influenza-like organisms were isolated in seven of the eleven cases, in two they were very numerous Streptococci, few in number, were found in eight, diphtheria bacilli in one, and *Micrococcus catarrhalis* in all These latter organisms were very numerous in two cases in which influenza bacilli were absent The greenish pneumococcus colonies were found in all cases and about to the same extent as in normal throats

MENINGITIS

Opportunity was afforded to examine three cases of epidemic meningitis in children In the nose in one case was found an influenza-like bacillus Meningococci were isolated in two of the three cases from the nasal mucosa where they occurred in large numbers All of them showed some nasal symptoms One of these cases developed a double otitis media Streptococci and diphtheria bacilli were isolated in culture, but no meningococci This case, early in the disease, had a purulent conjunctivitis from which a typical meningococcus was isolated The conjunctivitis completely disappeared in a few days on boric acid irrigation, leaving no serious result Another case of interest may be mentioned here A child 8 years old came into the hospital with the diagnosis of meningitis She was in coma, the temperature ranged from 102 to 104 F , marked rigidity was present not only of the muscles of the neck and back, but also of the limbs and especially of the jaw Spinal puncture was made with negative results Swabs from the nose showed nearly pure culture of diphtheria bacilli and a few were obtained from a throat swab Antitoxin was administered In thirty-six hours the temperature was normal, and the child made a rapid recovery During convalescence otitis media developed, and in the discharge were isolated numerous diphtheria bacilli and

streptococci This case illustrates the importance of nose and throat examination in infections generally

INFLUENZA BACILLI IN OTHER INFECTIONS

In order to show the prevalence of influenza bacilli, some data will be given on the occurrence of influenza bacilli in adults in other infections In twelve cases of bronchitis they were found in the sputum five times, in seventeen cases of typical clinical influenza the bacilli were only found three times In twenty normal throats of adults they were found twice, but not in large numbers

From the above data we conclude the organisms of the influenza type are very commonly found in the throat in various infectious diseases In whooping cough they are found in nearly every case some time during the course, often as soon as the whoop begins or slightly before and again not until some time after the spasms occur In measles they occur very commonly and early in the disease, that is, within the first three or four days There also generally appears to be an increase in the number of streptococci in both these diseases over that in the normal Otitis media complicating infectious diseases is due to a variety of organisms, of which the influenza bacilli may be one, but organisms of the streptococcus and diphtheria group are more frequently responsible Some of the latter organisms are true diphtheria, others appear to be pseudo forms (Hamilton)

The *Micrococcus catarrhalis* is an organism whose significance is rather difficult to interpret It is a non-Gram-staining diplococcus, practically indistinguishable from the meningococcus in its morphology, but differs essentially in cultural and other properties It is not uncommon to find organisms of this kind in the normal throat and nose, but, while sometimes quite abundant, they are seldom the predominating organism In whooping cough they are commonly found in the sputum, though it must be said it is very rare to find them as the predominating organism In measles and varicella they are even more common and occasionally are found in large numbers and to the exclusion largely of other organisms It appears probable that they are increased in all infections of the respiratory passages, but it is difficult to say just how much they have to do in producing the symptoms That they may play a part in some cases can hardly be questioned, and in support of this a few cases will be cited in which this organism occurred in almost pure culture

A young man entered the hospital with marked bronchitis and laryngitis, accompanied with almost complete loss of voice He expectorated considerable mucus and this material washed in sterile water gave an almost pure culture of *Micrococcus catarrhalis*, smears of the sputum showed the same organism This condition turned out to be the initial bronchitis of typhoid fever Butler reported before the Chicago Medical Society, an epidemic occurring in young infants at the Maternity Department of the Presbyterian Hospital of Chicago, characterized by the occurrence of fever and laryngeal and bronchial symptoms Of these cases one patient died and came to autopsy There was a broncho-pneumonia present and a large amount of purulent mucus in the trachea and bronchi In both smears and cultures of this material the predominating organism by far was a typical *Micrococcus catarrhalis* In this case, however there were also a few pneumococci and their presence makes it difficult to interpret the significance of the former organism Many of the micrococci were inside the leucocytes, showing that they are readily susceptible to phagocytosis Examination of the blood and other body fluids for bacteria gave negative results

In a third case the patient had, following an ordinary cold, a persistent choking cough which continued for a number of weeks The cough was very distressing, especially at night and caused the patient to lose sleep Otherwise she was well A small amount of thick mucus was expectorated and this chiefly in the morning on rising Examination of this sputum washed in sterile water gave an almost pure culture of *Micrococcus catarrhalis* The same result was obtained at two different examinations at an interval of about ten days

M Kirchner,[2] in 1890, observed this coccus in patients with influenza and associated it with the etiology of the disease R Pfeiffer cultivated this germ from the sputum in a variety of infections of the respiratory tract and gave it its present name Ghon and H Pfeiffer[2] found it eighty-one times in 140 cases of respiratory affections, they considered it usually saprophytic but capable of producing at times acute or subacute lesions It has been found by many others, especially in the respiratory tract in various infections of children, and has been associated with the cause of pertussis by Ritter and Buttermilch

From the above data and the reports of others it appears that the *Micrococcus catarrhalis*, though frequently present as a saprophyte in the normal respiratory passages, is often associated with various kinds of inflammatory conditions in this region, especially in children It can not be considered a specific organism for any particular characteristic group of symptoms, but appears to act as a common invader secondary to a variety of specific diseases The possibility of its being a primary invader at times and under certain conditions seems reasonable

The occurrence of the influenza bacilli in so few of the cases of clinical influenza or grippe is worthy of some comment These cases were all diagnosed clinically as acute influenza and were typical in their symptomatology The sputum was obtained early in the disease and in almost every case the plates were characterized by the relatively large number of streptococcus colonies present In those cases in which the influenza bacilli were found they were not present in especially large numbers It is undoubtedly true that most of the cases reported as clinical influenza, at least in recent years, are not influenza infections at all but are infections with other organisms, principally streptococci and pneumococci and perhaps also the *Micrococcus catarrhalis* It appears to be true that a number of organisms can produce practically an identical clinical picture, and this has come to be known as influenza or grippe since the great epidemic of 1889 90 By many, such cases are assumed, without a bacteriologic examination, to be infections with the influenza bacillus, whereas in reality, as the above data, as well as many recent reports in the literature indicate, the cause is usually due to other organisms, the most common of which is undoubtedly the streptococcus

The significance of the influenza bacilli found so frequently in the throat in infections of various kind deserves some comment. These bacilli have a low degree of virulence for animals If very large quantities are injected into the peritoneal cavities of guinea-pigs the animal dies in twelve to twenty-four hours and the

2. Ztschr f. Hyg 1890 ix, 528

bacilli may be recovered from the blood Attempts to exalt their virulence have not been very satisfactory

Finding them occasionally in normal throats indicates the possibility that they may exist as harmless saprophytes or as organisms with a potential pathogenic function awaiting an opportunity favorable for development. That they are not always harmless saprophytes is shown by the fact that bacilli isolated from whooping cough and transplanted in the normal mucosa of the human throat will multiply abundantly and produce definite reaction In one such experiment made by the writer on a young man whooping cough did not develop, but a slight fever lasting for a few days and some throat symptoms occurred, accompanied with the expectoration of a large amount of thick tenacious mucus in which the bacilli existed in large numbers in almost pure culture We are, therefore, justified in attributing to them pathogenic properties for man, even though they may not be a specific primary cause of disease

A careful comparison was made of the influenza-like bacilli from the various groups of diseases in which organisms of this type were isolated This included whooping cough, measles, epidemic meningitis, varicella, clinical influenza, bronchitis, normal throats, and also strains isolated from conjunctivitis, scarlet fever, and tonsillitis Morphologically and culturally no differences are found which would serve to subdivide them into groups The organisms from these various diseases agree very closely Strains from the same disease differ from each other slightly Some tend to form threads very readily and are slightly larger than other strains, but this was found in all the diseases where a number of strains were isolated Altogether about one hundred different strains have been tested Without exception all require hemoglobin media They are non-Gram-staining, short bacilli and stain more deeply at the ends with methylene blue In the throat they never form threads, but in culture nearly always a few may be found, and in some strains this tendency is very marked, especially in the older cultures We may say, then, that these bacilli agree very well with the influenza bacillus as described by Pfeiffer, and the forms showing a tendency to form threads correspond to his pseudo-influenza bacilli which he found in broncho-pneumonia and other conditions That there is no essential difference between them seems to have been definitely determined by a number of writers, and the result given in this paper also indicate such to be true

AGGLUTINATION OF INFLUENZA-LIKE BACILLI

In order to show possible differences in the strains of influenza-like bacilli, rabbits were immunized against organisms isolated from whooping cough, measles, clinical influenza, scarlet fever, varicella, tonsillitis and conjunctivitis The animals were first injected subcutaneously with the living germ and later intraperitoneally with gradually increasing doses Finally they were injected twice with two agar slants of the living germs intravenously The animals gradually lost weight, but otherwise showed little effects from the injections At first they were injected once a week and later twice a week, this being continued for from eight to twelve weeks The agglutination tests were made by the microscopic method and controlled with the microscope This is the method of Cantani, Wollstein and others There was some difficulty at first in getting hemogeneous suspensions of the bacilli, but by using young cultures, preferably from twelve to eighteen hours old, thoroughly agitating them in normal salt solution and then centrifuging out the clumps that may remain a satisfactory suspension was obtained for agglutination purposes The serum was diluted with normal salt solution and the dilutions 1/10, 1/20, 1/50, 1/100, 1/200, 1/500, 1/1000, and occasionally higher were used The serum of normal rabbits causes some clumping in all strains at a dilution of 1/10 Occasionally some strains were clumped at 1/20, but never any higher In the immune animals agglutinins are present at the end of six weeks or earlier In from eight to twelve weeks they are abundant The sera in all the animals agglutinated the homologous organism at a much higher dilution than any strain isolated either from the same disease or from another disease This was true, without exception, in every test made All the sera agglutinated the homologous organisms in dilutions of 1/500, some at a dilution of 1/1000, and in one instance the serum from an animal immune to an organism from tonsillitis at a dilution of 1/5000 The agglutination of the other organisms varied considerably, but in most instances showed some increase above that obtained with normal serum As a rule, this varied from 1/50 to 1/100 and occasionally rose to 1/200 Organisms from the same disease as the organism used to immunize, but from a different patient, did not appear to be agglutinated at higher dilutions than organisms isolated from other diseases Table 1 is given as a fairly typical illustration of the agglutination of these bacilli Tables showing the agglutination by sera immune against these bacilli from other sources show the same facts as this table and are consequently omitted In every case, as in the table given the agglutination of the homologous organism takes place with far higher dilutions of the serum than that of any other strain It appears, therefore, from these results that common agglutinins are developed for all these strains of influenza-like bacilli about to the same extent and on this basis no subdivision of these bacilli into groups can be made

TABLE 1 —AGGLUTINATION OF INFLUENZA LIKE BACILLI BY RABBIT SERUM IMMUNIZED AGAINST A BACILLUS ISOLATED FROM PERTUSSIS

Source of Organism	Dilutions.							
	1/10	1/20	1/50	1/100	1/200	1/500	1/1000	Salt Solution Control.
Pertussis (homologous organism)	+++	+++	+++	++	++	++	+	0
Pertussis (not homologous)	+++	+++	+	+	0	0	0	0
Measles	+++	+++	+++	++	+	0	0	0
Conjunctivitis	+++	+++	++	++	0	0	0	0
Tonsillitis	++	++	+	+	0	0	0	0
Laryngitis	+++	+++	++	+	0	0	0	0
Varicella	+++	+++	+++	+	0	0	0	0
Influenza ..	++	+++	++	++	+	0	0	0

During the past season so few cases of pertussis in which these bacilli are common were available for examination that studies on the agglutinative property of the sera of patients for these influenza-like bacilli have hardly begun This subject will be largely reserved for consideration at some future time and only a few statements made here Normal human serum produces clumping of the strains of bacilli given in Table 1 at dilutions of 1/10 and slightly at 1/20 Practically no difference appears between the strains in this respect. In four cases of pertussis the sera clumped the bacilli from pertussis cases in slightly higher dilutions than those isolated from other sources These dilutions

varied from 1/100 to 1/200 In one case of "grippe" in which the patient's throat showed these bacilli were very numerous, the serum fourteen days after the onset did not agglutinate the homologous strain or strains from other sources

PHAGOCYTOSIS OF INFLUENZA BACILLI

Within the last few years a large amount of study has been given to phagocytosis of bacteria and through animal and test-tube experiments considerable light has been thrown on the mechanism of this process It has been shown by Wright and others that bacteria, as a rule, are taken up by leucocytes only when serum is present Leucocytes washed several times in salt solution are no longer capable of ingesting organisms, but if serum is added to these corpuscles they promptly regain this property The serum, therefore is the important factor in determining phagocytosis, and the particular substance in the serum which causes it has been called "opsonin" A study of the influenza bacillus with reference to phagocytosis was made and the results will be briefly indicated

Pfeiffer noted the occasional occurrence of these bacilli inside the leucocytes in the sputum in influenza bacilli more particularly in the latter part of the attack In the sputum in other infections such as pertussis in which similar bacilli are found it is only occasionally that they are encountered inside the pus cells When the bacilli in moderate quantities are injected into the peritoneal cavity of animals they are taken up in large numbers by the numerous invading polynuclear leucocytes, but if very large amounts of bacilli are injected the exudate contains few leucocytes and the animal dies in 12 to 20 hours The few leucocytes, however which may be present under these conditions readily take up the bacilli

In the test-tube strains isolated from measles, whooping cough, tonsillitis, pharyngitis, varicella, influenza, and conjunctivitis were all found to be readily taken up by human leucocytes in defibrinated blood in the course of twenty minutes or less If washed leucocytes are used the bacilli are also taken up but not so rapidly as when serum is added to them When thick suspensions of bacilli are used in from twenty to thirty minutes the leucocytes in both cases are crowded with them If dilute suspensions are used in twenty minutes a distinct difference in phagocytic activity between the washed and unwashed leucocytes in favor of the latter is seen, but after from four to eight hours this difference disappears, the leucocytes now being usually so filled with the bacilli that their number can not be accurately determined by count

This phagocytosis in salt solution, which may be referred to as spontaneous phagocytosis, appears at present at least somewhat exceptional for nearly all bacteria so far tested seem to require the presence of serum for phagocytosis However, it has been observed by Miss Tunnicliff in this laboratory that abundant phagocytosis of the *Bacillus fusiformis* occurs in salt solutions without the presence of serum and it is also known that carmine particles are readily taken up by leucocytes in the absence of serum Wright observed spontaneous phagocytosis of tubercle bacilli in certain concentrations of salt solution The greatest spontaneous phagocytosis occurred in a 6 per cent solution this progressively decreased and practically disappeared in a 1 3 per cent solution Varying concentrations of salt at least within the above limits have no effect on phagocytosis of influenza bacilli This is shown in Table 2 In this experiment a thin suspension of bacilli was used otherwise phagocytosis would have been so rapid that the bacilli could not be counted in the 20-minute and 2-hour intervals

TABLE 2—SHOWING EFFECT OF VARYING CONCENTRATIONS OF NACL ON PHAGOCYTOSIS OF INFLUENZA BACILLI BY NORMAL HUMAN CORPUSCLES WASHED FOUR TIMES

Concentration of NaCl Solution	Phagocytosis		
	20 minutes.	2 hours	6 hours
6 per cent.	5	3 1	20+
7 per cent.	3	2 4	20+
8 per cent.	9	4 8	20+
85 per cent.	3	4 0	20+
9 per cent.	4	8 5	20+
1 0 per cent.	1	0 9	20+
1 1 per cent.	15	1 2	20+
1 2 per cent.	1	8 0	20+
1 3 per cent.	.2	3 8	20+
1 4 per cent.	.3	3 9	20+

Spontaneous phagocytosis can not be satisfactorily explained by insufficient washing of the corpuscles In some of the experiments these corpuscles were washed seven times, and each time there was added many times as much salt solution as there were corpuscles present This amount of dilution and washing is quite sufficient to completely inhibit phagocytosis of staphylococci and meningococci In several of the experiments staphylococci and meningococci were used as controls and in no instance were they taken up even after eight hours[3] Again spontaneous phagocytosis can not be explained by long-continued cultivation on artificial media Eleven strains isolated from various sources without exception showed spontaneous phagocytosis, though some had been isolated from the throat lesions only a few days, while others had been under cultivation for five months The possibility of explaining the large numbers of bacilli in the leucocytes after a few hours by growth having occurred inside the leucocyte from an occasional ingested bacillus was ruled out by using bacilli killed by heating to 46 C for thirty minutes That the bacilli do not become sensitized by growing on blood media which they require was shown by using washed corpuscles in the media and also by heating the blood to 95 C for one hour before adding it to the media Lastly spontaneous phagocytosis is not the mere adhesion of the bacilli to the surface of the leucocyte, for its appearance is identical with that of phagocytosis occurring in serum and mere adhesion of bacteria to a leucocyte is manifested by a marginal arrangement of the organisms We are justified, therefore, I think in considering the influenza bacillus an organism which does not require the presence of serum and which may be classed with such inert bodies as carmine particles Opsonins, therefore, do not appear to be the only factor which control the ingestion of bodies by leucocytes The fact should be borne in mind however, that in the presence of serum this process of phagocytosis is accelerated

It has been shown for a number of organisms that phagocytosis is more active in immune serum than in normal serum and this has been explained by the increased opsonic content of the former Experiments to determine this point were made using the sera of rabbits immunized against various strains of influenza or-

3 In the staphylococcus suspension the leucocytes are disintegrated to such an extent in the course of a few hours by the leucocidin formed by the organisms that phagocytosis can not be determined

ganisms. The results with six sera on eight different strains of bacilli show some variation but it was found that frequently phagocytosis in the immune serum exceeded that in normal serum and in some cases it was marked. There was little if any, difference between the phagocytosis of the homologous organism and other strains from the same or from some other disease.

Some factors enter into the determination, however, which make it very difficult, if not impossible, with present methods to obtain an accurate estimation of a possible opsonic increase in the immune serum. As disturbing elements may be mentioned spontaneous phagocytosis which can not be eliminated from the determinations. Another factor to be considered is the agglutination of these bacteria by immune sera. Bacteria in clumps naturally are taken up in larger numbers than in homogeneous suspension, and consequently increase in phagocytosis in agglutinating serum does not necessarily mean increase of opsonin. These facts together with the fact that these bacilli are extremely small, staining poorly, as a rule, and would be difficult to accurately count even under the most favorable conditions, render opsonic determination for these organisms with the present methods at least very untrustworthy.

SUMMARY AND CONCLUSIONS

1. Influenza-like bacilli are very commonly found in the upper respiratory tract in various infectious diseases and especially in whooping cough. Occasionally they occur in normal throats.

2. Various organisms occur in the discharge in otitis media, the streptococci being the most common; occasionally influenza bacilli are found.

3. The *Micrococcus catarrhalis* is a common inhabitant of the respiratory mucosa in infectious conditions and in some cases exist in nearly pure culture. It does not appear to produce specific lesions.

4. The influenza-like bacillus from whooping cough is pathogenic for man; its specificity is doubtful. Present data permit us to consider these bacilli as secondary invaders in all the diseases in which they are found. A primary invasion at times should be considered a possibility.

5. Influenza-like bacilli are readily taken up in the test-tube by unwashed leucocytes and to a less extent by washed leucocytes. This spontaneous phagocytosis is not affected by varying the concentration of the salt solution between 0.6 per cent and 1.4 per cent.

6. Injection of these bacilli into animals causes the production of specific agglutinins and probably also an increase in opsonins in the serum. Because of the occurrence of spontaneous phagocytosis and agglutination in such sera the determination of the opsonic index for these bacilli is rendered unreliable.

Extraction of Set of False Teeth from the Esophagus.—Chiari has recently reported (*Wien. Klin. Wochschr.* xx, 147, 1907) the successful extraction of a set of 5 false teeth on a plate 4.5 by 2.5 cm., which had been swallowed during sleep. The patient was a man of 38, who awakened suddenly with suffocation and retching, which soon subsided, but he could not eat solid food. He had no pain nor fever and several physicians diagnosed cancer of the esophagus. After a month radioscopy revealed the foreign body and it was readily inspected through an esophagus tube after cocainization. A smaller tube was then introduced and the foreign body was drawn out readily, not through the tube but with it. He has found inspection usually possible in such cases as condition that favored swallowing the body also favor inspection.

THE CURE OF HYSTERICAL PARALYSIS BY RE-EDUCATION OF KINESTHETIC CENTERS

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The sudden disappearance of hysterical paralysis, through religious excitement, hypnotic suggestion or great faith in the assertion of a particular physician, has been made so familiar to the profession that many, no doubt, think of it as the normal and eminently desirable mode of recovery. I have had a moderate share of such cases, sometimes being able, within the clinic hour, to make a patient with hysterical hemiplegia or paraplegia throw away his crutches and run about the room. These spectacular cures are intensely interesting and valuable from the purely scientific as well as from the practical standpoint, and they are within the reach of any physician who is sure of his diagnosis and able to pick out the favorable case.

Nevertheless, the method that aims at such sudden cures is not the one to be generally chosen. It will succeed in only a few of the cases and it stakes too much on the immediate effect of predictions, which, by promptly failing of verification, may prevent future success. Moreover, prompt success may have its disadvantages. Immediate relief from paralysis, which is only one symptom of the hysterical state, may prevent the patient from receiving that enlightenment and discipline which are essential to anything more than a superficial and transient improvement.

As a basis for a better method we must have an explanation of hysterical paralysis that will unite all favorable influences into a consistent plan of treatment. This was impossible a generation ago, but modern neurology can at least furnish a working hypothesis.

Probably the most constant accompaniment of hysterical paralysis is the anesthesia of the paralyzed parts, especially the absence of those sensations normally caused by motion. The patient can not feel the motions of the paralyzed limb nor can he think of them, except, perhaps, in visual images. Now this absence of kinesthetic sensations and kinesthetic ideas is not merely a complication. It must necessarily cause paralysis, because every voluntary motion must be preceded by the idea of the motion, and its continued execution must be controlled by an orderly series of sensations aroused by the movements already made.

These sensations and ideas of motion are a function of the sensory convolutions back of the Rolandic fissure. In normal volition these convolutions are first excited (by association impulses from other cortical centers) and then, directly or indirectly, by association impulses, they arouse the corresponding motor centers in the precentral convolution. In sending out these association impulses the kinesthetic centers are subject to facilitation and inhibition through the influence of other cortical centers. All that we know of the mental factors in hysteria favors the view that in hysterical paralysis the kinesthetic center is overwhelmed by a preponderance of inhibitory impulses, incidental to the perverted ideas and emotions. It can not act with sufficient vigor to awaken the idea of what is to be done or to send the necessary association impulses to the motor centers, so the limb remains motionless, although the motor centers, connecting tracts and muscles are in perfect order. This is in striking contrast to cases of organic paralysis caused by lesion below the cortex, in such cases the

kinesthetic centers being unharmed, the patient retains a vivid idea of the movement desired and often feels that the limb must move or even that it has moved

If this theory of hysterical paralysis is correct the first object is to awaken the dormant kinesthetic center This can best be done by a skilful combination of favorable influences, emphasizing now one and now another, according to the needs of the individual patient and the progress of the case If the improvement is rapid, very well, but if it is slow there is still a definite plan to be followed

First in time and also in importance is the effort to raise the emotional tone of the patient It is a familiar fact that voluntary motion is greatly facilitated by exhilarating emotions and powerfully restrained by depressing ones Mania and melancholia furnish extreme illustrations of the general law and the milder emotional states have a proportionate effect of the same kind The effort to substitute exhilarating for depressing emotions should be along two different lines, mental and physical

After the careful recording of the history and thorough examination of the patient, the assurance that there is no organic disease and that recovery may confidently be expected is the best beginning of treatment, and throughout the case success and favorable indications are to be dwelt on and the opposite ignored Sometimes our first attempts in this direction meet with but scant success, the patient may be apathetic or may even oppose and actively resent our cheerful view of the case When this attitude is encountered it is well to resort to a device I learned long ago from Dr S Weir Mitchell If the patient is a young woman intimate that you are especially anxious to get her well because her disability would, if permanent, necessarily interfere with her happiness by making her less attractive and possibly subjecting her to ridicule Usually a mere hint, let fall apparently by accident, will be quite sufficient, and the idea once lodged we should hasten to dwell on the contrasted prospect of a happy life and the pride of health In the case of a young man or boy an analogous idea may easily be made effective With children the offer of a reward, to be delivered when recovery is complete or has reached a certain stage, will be better

The physical measures for invigorating the nervous system and at the same time improving the emotional condition, namely rest food, tonics and sedatives, are of great importance, but I will not consider them in detail, as physicians are generally far more familiar with them than with the mental influences just considered I think also that they are on the whole less essential to success It seems to me that the profession has erred very greatly in thinking of the brilliant results of the rest cure in certain cases of hysteria as due to the physical effects of rest in bed, full feeding, massage and electricity, whereas it is mainly due to the great psychologic insight and moral influence of Dr Mitchell and his successful followers Nevertheless both mental and physical remedies should be applied in harmonious combination

While trying to improve both the mental and the physical functions of the brain as a whole we can act specifically on the dormant kinesthetic centers by sensory stimulation Strong faradic currents, applied to the skin and muscles, followed by vigorous even rude passive motion of the affected joints have a powerful tendency to restore sensations and ideas of motion The patient must be urged to pay close attention and to note even the slightest beginning of sensation In hysterical anesthesia the loss is not absolute The sensory centers act, although inefficiently, and the sensations are obscurely present, but they are so feebly associated with what is vividly in the field of consciousness that they seem to be absent. Attention to the anesthetic limb and the effort to recognize its sensations tends to bring its cortical sensory centers into relation with all the rest of the cortex and to make its sensations a part of the whole field of consciousness

Having awakened some degree of normal sensibility, the cure will be completed by exercises in voluntary motion But preliminary to these any inhibitory fears must be overcome For example, the patient may say that she not only can not move the left leg, but that merely trying to do so causes a dreadful pain in the head, neck or back This pain is doubtless purely mental in its origin, but it is nevertheless real (just as nausea excited by the idea and fear of nausea is real) and the fear of pain may excite contraction in the opposing muscles when the patient is urged to move the limb The difficulty can generally be removed by careful examination of the seat of pain and assurance that no harm can come of the attempt, but that on the contrary the pain will quickly cease to appear if defied to do its worst

If the paralysis is nearly total the limb should be so placed that its weight will favor the attempted movement. This will assure some motion which the patient sees and can be encouraged to increase A beginning once made, the extent and strength of the movement can gradually be increased, always giving something concrete to do, such as kicking an object or placing the foot on it, and always ignoring failure and enthusiastically praising success When some progress has been made definite movements can be assigned for practice in the interval of the physician's visits

In this way the normal control of the muscles can gradually be approached and the length of time required may be made an advantage by using it to carry on a reeducation in composure and self reliance, without which the cure of paralysis will be but a temporary change in the symptoms, not relief from the disease

I have recently followed this method of treatment with great care in two cases of typical hysterical hemiplegia, and in both cases the clinical facts and favorable results were in perfect harmony with the theoretical considerations here set forth One patient was a young man whose paralysis followed a trivial railroad injury There was loss of posture sense and of ideas of motion in the right leg and efforts to move it caused lumbar pain The arm was similarly affected, but in a slighter degree In spite of the fact that he was claiming damages and that I saw him at the request of the railroad company, he willingly co-operated with the treatment, and when he left Denver about two months after the accident was almost entirely well The other case was that of a young woman whose paralysis came on gradually at the end of pregnancy and during the puerperal period after a long series of confinements debilitating diseases and worries The left leg and arm were paralyzed with corresponding loss of posture sense and ideas of motion, the leg being worse and the right side was affected in the same way but to a much slighter degree She walked only with the aid of crutches dragging the left leg The paralysis of the leg seemed absolute in the ankle and knee and it was difficult to make any start in voluntary motion There was also an inhibitory

terical pain After partial revival of the posture sense by means of electricity and passive motion, exercises in moving the foot were begun and progress, although slow, was steady After a time the crutches were discarded and walking was good, with the aid of a light cane A striking feature in this case was the slowness of all voluntary motions in the affected area When the patient left for her distant home, although this defect was still apparent, there had been a great gain in promptness of movement. The gain in appearance, general health and mental vigor was quite as marked as that of voluntary motion

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THE UNDERLYING PRINCIPLES OF TUBERCULIN THERAPY *

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Tuberculin has now been subjected to the test of time It has been in continuous employment for fifteen years It has been used in many experiments on animals and its virtues have been tested on human beings In spite of this mass of laboratory and clinical experience there seems to be but a hazy idea as to what tuberculin is, how it acts, and what it is expected to do

In order to understand the principles which underlie tuberculin therapy we will discuss First, Nature's method of cure in specific diseases, second, conditions which militate against tuberculosis in curing itself, third the manner in which specific inoculations of tuberculin aid in the cure of tuberculosis

NATURE S METHOD OF CURE IN SPECIFIC DISEASES

When pathogenic microbes gain entrance to the organism certain phenomena take place If the microbes are exceedingly virulent, if the resisting power of the organism is low, or if the microbes gain entrance in great numbers, infection is likely to occur On the other hand, if the microbes are not highly virulent and do not gain entrance in too large quantities and the resisting power of the organism is good, infection will probably be warded off

When pathogenic microbes gain entrance to the body the organism at once attempts to destroy them An increase in the amount of serum and in the number of leucocytes at the point of attack is at once noticed The microbes, on the other hand, begin to multiply and a battle for mastery ensues The microbes during their activity produce a toxin which has a stimulating effect on the vasodilators[1] and cause an afflux of serum to the part If given off in small amounts the toxin stimulates the cells of the organism, which react and form defensive bodies if given off in large quantities the toxin may destroy the cells entirely Thus a slight infection tends to cure itself while a severe one tends to destroy the invaded organism

Several defensive bodies which are produced by the organism have been studied in recent years, such as antitoxins lysins coagulins precipitins and agglutinins Recently there has been added to these another of great interest the opsonins of Wright and Douglas These investigators have shown that the old humoral theory of disease is, at least in part, correct The brilliant work of Metchnikoff had almost established the leucocyte as the chief agent in the defense of the organism against infection, but these investigators have gone one step further and shown the poor leucocyte to be absolutely helpless unless aided by the blood serum They have discovered in the blood serum a substance which acts on bacteria and prepares them for destruction by the leucocytes This substance they have called "opsonin"

Through the study of the opsonic power of the blood our knowledge of the phenomena which take place during infection and during Nature's efforts at curing the infection have been materially increased

If an organism is infected by a given pathogenic microbe the power of the blood for destroying that microbe diverges from the normal If the infection is local the opsonic power is persistently below normal, if it is systemic it will vary from below normal at certain times to above normal at other times[2] However the opsonic power of the blood of an infected organism is naturally low for the specific microbe, causing the infection

In order to cure an infection Nature increases the natural defenses of the body fluids after the manner mentioned above This can be studied with exactness by determining the opsonic power of the blood, especially in systemic infections Every now and then a new amount of toxin will be delivered If the amount is not too great the cells will be stimulated and react, increasing the natural defenses, as shown by a rise in opsonic power, and the patient will improve, or, if the amount of toxin be too great, the opsonic power will be lowered and the patient may be destroyed

CONDITIONS WHICH MILITATE AGAINST TUBERCULOSIS CURING ITSELF

When tubercle bacilli gain entrance to the tissues they at once begin to multiply They give off toxins which stimulate the vasodilators, causing an afflux of serum and leucocytes to the point of attack If conditions are favorable to the invaded organism the bacilli will be destroyed If not the micro-organisms become surrounded by leucocytes, proliferation of the fixed cells takes place, and the bacilli are shut in A tubercle is formed as a result of Nature s conservative effort to wall off the bacilli

But this very conservatism proves an injury and defeats its own purpose As the tubercle increases in size the blood supply to its interior is shut off Toxins are liberated by the bacilli, and this poorly vascularized tissue breaks down, the center of the tubercle softens These toxins if set free into the blood stream in the proper quantities would stimulate the cells of the organism to the formation of defensive elements, and thus heal the lesion, but they are liberated at irregular intervals and in varying quantities, consequently their value as curative agents is interfered with

Another thing must be considered The tubercle bacillus is surrounded by a dense envelope which prevents it from giving off its toxins freely, infection, therefore, can occur without the cells of the organism having received sufficient stimulation from the bacilli to materially increase the natural defenses In tuberculosis, then, there is a failure on the part of Nature to supply the stimulation necessary to bring about a cure If the natural defenses of the organism are sufficient

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* Read before the American Therapeutic Society New York May [illegible] 1906

1 Leger Infectious Diseases 1903 170

2. Wright General Principles of the Therapeutic Inoculation of Bacterial Vaccines as Applied to the Treatment of Tuberculous Infection Lancet, Dec. 2 1905

either infection does not occur or healing takes place, but if any considerable aid is required a cure does not result

One other factor which prevents a cure in tuberculosis is the tendency for the disease to spread As stated above, the natural defenses of the organism infected by tubercle bacilli are reduced When tubercles soften and break down bacilli are liberated They may pass out through the air passages or they may be set free in the tissues and tend to cause a new focus The conditions are nearly always favorable for infection to take place, resisting power low, blood poor in defensive bodies, and not able to freely enter the parts where infection is starting If these bacilli were to pass into the blood in not too great quantities at a time so that they could be freely acted on infection would not be so common, but instead they pass into adjacent lymph spaces where conditions are most favorable for infection to take place In fact, we may assume that infection takes place in favorable locations as a rule, as Wright[2] so well expresses it

I conceive that these micro organisms are cultivating themselves under conditions which do not even remotely resemble those which they would have to confront in the circulating blood. In the case of bacteria in the actual blood stream all the antibacterial elements of the organism would come into application on them In the case of bacteria cultivating themselves in the tissues, only those antibacterial elements would come into application which had passed out from the blood in the lymph in the region of the infection Further, inasmuch as lymph, coming in contact in succession with a number of bacteria, or as the case may be, with their products, would part with its antibacterial elements to those first encountered, retaining after percolating through a first bacterial nidus to a second, or through the outer portion of such a nidus to its interior, a residual trace only of its orginal antibacterial power, there would come into existence, in particular in the case when the lymph flow stagnated in the tissues, conditions far more congenial to the cultivation of bacteria than those which obtain in the blood.

HOW TUBERCULIN AIDS IN THE CURE OF TUBERCULOSIS.

As previously stated, Nature's method of cure in infectious diseases consists in the organism producing defensive bodies in response to stimulation from toxins engendered by the specific microbe which causes the disease in question Attention was also called to the fact that in tuberculosis, owing to the nature of the bacillus and the character of the tubercle, this specific toxin which stimulates the cells to the formation of anti-bodies fails to gain access to the blood in proper quantities and at the proper intervals to be effective In this connection it should be remembered that too great stimulation is harmful and will defeat Nature's own purpose That the blood is deficient in protective substances is shown by the measurement of its opsonic power This is, as a rule, below the normal standard, although there are exceptions which remain to be explained

Bulloch,[3] assuming that the opsonic power of his own blood is normal compared that of 84 healthy people with it Counting his own as one the index of the 84 averaged 96, and varied from 8 to 1 2 From these experiments we assume that the opsonic power of the blood of healthy individuals toward the tubercle bacillus varies from 8 to 1 2

In 150 cases of lupus tested by the same author the average opsonic index was 75 and the manner in which the various cases had responded to treatment was in accord with the index Those which had done badly showed a low index, while those that had responded to treatment showed a higher index That the opsonic index in those patients suffering from tuberculosis can be raised by the injection of tuberculin has been thoroughly established by Wright,[2] Bulloch,[3] Lawson and Stewart[4] and others

Lawson and Stewart[4] demonstrated what can be done by injections of tuberculin in raising the opsonic index They measured the index in twenty-four patients who had undergone the usual open-air sanatorium treatment for periods varying from one month to two years and three months, and whose indices were 80 and below, in twenty out of twenty-four cases Within a period of six weeks during which inoculations of tuberculin were given the indices of these patients went to normal or above normal in all but one case, as is shown in the following tables taken from the paper quoted

TABLE 1—THE OPSONIC INDICES OF 25 CASES OF PULMONARY TUBERCULOSIS AFTER VARYING TERMS OF TREATMENT (WITHOUT TUBERCULIN INOCULATIONS)

Initial	Duration of disease		Duration of Treatment				Opsonic Index
			Climate		Sanatorium		
	Years	Mths	Years	Mths	Years	Mths	
M.	2	6	1		1		1 1
K	1	2			1	2	1 0
I		5				5	0 9
H		5				2	0 9
McC	4	3			1	7	0 9
M	1					2	0 8
L	4	6	4				0 8
McD	3	10	2	4	1	4	0 8
I	2				2	3	0 8
W	1	5		2		10	0 8
C	4					2	0 8
T		2				2	0 8
I	4	3				1	0 7
McA	4	1	2	6	1	1	0 7
M	7		1		1	2	0 7
H	8		6			6	0 7
A	1	2				9	0 7
B	1	9				10	0 7
B	2			3	1	4	0 7
M	1					4	0 7
K		4				4	0 7
W	3				1	4	0 5
A	3	6			2	2	0 5
S	1	5		1	1		0 5
G	2	4			1	10	0 5

TABLE 2.—COMPARISON OF THE OPSONIC INDICES OF THE BLOODS OF 23 PATIENTS TAKEN AFTER A TERM OF SANATORIUM TREATMENT ONLY WITH THOSE TAKEN AFTER A SHORT TERM OF SANATORIUM PLUS TUBERCULIN (T R) INOCULATIONS TREATMENT

Initial.	O I before inoculation.	Doses given within a period of six weeks	O I after inoculation
S	0 5	4 of 1/500	1 7
I	0 7	4 of 1 500	1 3
Mc A	0 7	4 of 1 500	1 1
McD	0 8	4 of 1/500	1 0
W	0 7	5 of 1/500	1 1
A*	0 5	1 of 1/500 1 of 1/1000	0 8
M	0 7	3 of 1/500	1 3
B	0 7	3 of 1/1000	1 -
I	0 8	3 1/500 1 1/500 1 1/500	1 3
A	0 7	3 of 1/500	1 -
L	0 9	3 of 1/1000	1 -
W	0 8	1 of 1/1000	1 1
K	1 0	1 of 1/1000	1 1
H	0 9	3 of 1/1000	1 4
B	0 7	4 of 1 00	1 7
M	0 7	1 1/1000 1 1/1000 1 1 1000	1
C	0 7	4 of 1 00 1 of 1 400	1 1
H	0 7	2 of 1/1000	1 0
C	0 8	2 of 1/1000	1 0
K	0 7	4 of 1 1000	1 7
McC	0 9	2 of 1 1000	1 1
T	0 8	2 of 1 500	1 -
M	0 8	2 of 1 00	1 4

* Spinal complication Index eventually

3 The Treatment of Tuberculosis by Tuberculin Lancet, Dec. 2, 1905

4 A Study of Some Points in Relation to Tuberculin. Lancet, Dec. 9 1905

This is in harmony with the observations of Koch,[5] Moeller[6] and others as regards the increase of the agglutinating power of the blood after the administration of tuberculin. This increase of the agglutinating and opsonic power of the blood means that the natural defenses of the organism have been increased. The organism has been given greater power to combat the disease than before. In Table 1 the average opsonic index is shown to be .75 during ordinary sanatorium treatment, and in Table 2 it appears as 1.19 after tuberculin has been added. Thus the power of the organism to combat the disease as measured by the opsonic power of the blood was increased 58.6 per cent by the addition of tuberculin.

The importance of this can be seen in this way. The opsonic power is that power of the blood serum which prepares the bacilli to be destroyed by the leucocytes. In the above tables the leucocytes of those cases which were treated by ordinary sanatorium methods (Table 1) were able to destroy only 75 per cent of the number of tubercle bacilli that a normal person's blood should destroy, while the leucocytes of the same patients (Table 2) after treatment with tuberculin were able to destroy 19 per cent. more than the leucocytes of a normal individual.

The value of this increase of the natural defenses of the organism is evident. When we remember that the one reason why tuberculosis kills is because of its tendency to spread to new tissue, either adjacent or distant, we can readily understand how great an advantage those patients enjoy who have their body fluids well charged with defensive bodies, ready to attack and destroy the bacilli as soon as they come in contact with them. If the body fluids are rich in antibodies a small outbreak of bacilli into a new area would doubtless soon be cared for, while a large number might cause an infection, yet we can conceive of so many more of the germs being destroyed by a highly defensive body fluid than by one poor in defensive bodies that the infection could not help being favorably influenced, even if not prevented.

It has long been claimed by men familiar with tuberculin therapy that the disease shows much less tendency to spread in those cases treated by it than in those treated by ordinary methods. In the light of these new discoveries in immunity and immunizing treatment this is easily explained. This immunizing action of tuberculin is not its only method of aiding in bringing about a cure. Tuberculous areas are naturally very slow of healing. Tuberculin when administered in proper doses and at proper intervals furnishes a stimulation for these areas which hastens healing by stimulating the formation of fibroid tissue. Theoretically, then, tuberculin has a firm foundation on which to stand. Now let us turn our attention to its clinical workings and see if they confirm the theory.

The real test of tuberculin is in pure tuberculosis. After destruction of tissue has taken place, after other organisms have entered the field, after the general constitution has become undermined after consumption has supervened then we should not demand a cure of tuberculin. Nothing short of the elixir of life would be a specific for such a condition. While I believe that tuberculin is of great value in chronic non-febrile cases of tuberculosis yet it is in early cases that we should expect most brilliant results.

In a former paper[7] I collected data of 1,200 first stage cases of tuberculosis. Of these 611 were treated in sanatoria with ordinary open-air treatment, with a result of 391 or 64 per cent being apparently cured, 589, most of whom were treated outside of sanatoria, were treated with tuberculin, with a result of 496 or 84.2 per cent being apparently cured. This shows 20.2 per cent more apparent cures with tuberculin than without.

Another test of the value of tuberculin is the permanency of results. It is generally accepted that cases treated by it show less tendency to relapse. Although the comparative results of very few observers have been recorded, yet the general experience is in accord with that of Trudeau[8] and Turban.[9] In harmony with this is the observation of Bulloch[3] on the opsonic condition of patients who have been treated for tuberculosis. He examined the blood of 14 well-to-do patients who had undergone sanatorium treatment with so called satisfactory results. In every case but one the opsonic index was low. In at least one which was called a perfect cure the disease had relapsed within a year. This also is in harmony with the experience of Spengler. He says "a patient whose agglutinating power is low stands much greater risk of relapse than one whose agglutinating power is high."

Another clinical proof of the value of tuberculin is its action on local visible tuberculosis as we find it in the larynx. Most observers are of the opinion that tubercular laryngitis is almost absolutely fatal. The prognosis is not justifiable if the disease is treated in the proper way. No remedy offers so much hope in these cases as tuberculin. The dosage can be absolutely controlled, and with patience and perseverance a cure can be obtained in a large percentage of cases, even after ulceration has occurred, although the lesser infiltrations are easier to treat and offer better chances of cure. In a report[10] of 15 cases made by me the lesions healed so that there was no further reaction to tuberculin in eleven instances. These results were not obtained quickly. Treatment extended over several months, and in one or two instances many months. The key is patience and care. In a recent visit to many of the world's sanatoria I found that tubercular laryngitis was considered curable or incurable, as the observer used tuberculin intelligently or unintelligently or not at all.

Further clinical proof comes from those who are using tuberculin in treating pulmonary tuberculosis. Moeller's[11] statistics show a much larger percentage of cure where tuberculin is used, in fact, the reports from men who are using tuberculin intelligently can not be duplicated by the ordinary methods. Some men who are not thoroughly committed to the use of tuberculin employ it in cases which do not improve satisfactorily under ordinary methods. What greater compliment could be paid to this remedy? If it is of such great value in this class of cases would it not be reasonable to suppose that it might also help these same men in some of their easier cases?

Recent reports from Wright[7] and Bulloch[3] show that tuberculin can be used to advantage also in other forms of tuberculosis, such as ulcerations of the subcutaneous

5 Deutsch. Med. Wochschr., 1901, 48.
6 Ueber die diagnostische und therapeutische Verwendung des Tuberculins. Zeit. f. Tuberkulose und Heilstaettenwesen, 1902, 279.
7 A Critical Study of Tuberculin and Allied Products Based on a Collective Investigation. Therap. Gaz., 1903, p. 103.
8 Tr. of American Physicians, 1900.
9 Quoted in Welcker's Beitr. z. Frage d. Volksheilstätten, p. 22.
10 The Treatment of Tubercular Laryngitis with Watery Extract of Tubercle Bacilli with Observations on the Action of Specific Inoculations in the Treatment of Tuberculosis. Rep. of Nat. Assn. for Study and Prevention of Tuberculosis, 1906.
11 Zeitschrift f. Tuberkulose, 1904, v. 415.

tissue and bone, invasion of the lymph glands and infections of the genito-urinary system Wright's results in these usually intractable cases are so good that he says [2]

In view of the very favorable and what is almost more important, uniformly successful results which can, as will have appeared, be obtained even in the most intractable cases of localized tubercular infection by the therapeutic inoculation of tuberculin carried out under the safeguards explained above, and in view of the fact that not less favorable results can be obtained in connection with the treatment of other localized infections by the aid of the corresponding bacterial vaccines I do not hesitate to contend that we have, in the power of raising the antibacterial power of the blood with respect to any invading microbe, out of all comparison the most valuable asset in medicine I would, in view of this new asset in medicine, fain induce the surgeon to abate something from his conviction that extirpation and the application of antiseptics offer in connection with bacterial infection the only possible means of cure I would have the surgeon resort to extirpation only when the physician tells him that all other means have been exhausted and I would have the physician assume everywhere the rôle of an immunisator, and I would have him defer handing his patients over to a surgeon before he has tried in every case of localized bacterial infection which is unassociated with immediate risk to life the therapeutic inoculation of the appropriate bacterial vaccine

With this mass of evidence before us we must admit that tuberculin therapy is in accord with the modern theories of immunity, that theoretically tuberculin is capable of increasing the natural defenses of the organism when given in the proper doses at proper intervals, and that clinical experience in its administration warrants a more general use of it in combating tubercular infection

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CONSERVATIVE SURGERY OF ARMS AND LEGS

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The simplest way to treat a badly injured limb is by amputation, but the simple and direct method if it involves too much sacrifice may not always be best for the patient In certain cases amputation is slightly safer as the attempt to save the limb may be attended with some danger to the patient, while amputation shortens treatment and conservative treatment is tedious and may extend over many months What patient will not willingly accept a small chance of risk to life rather than the certainty of loss of limb? In times of such great national calamity as war when available hospital space is overcrowded, when proper nursing and dressing are at a premium, many limbs must, of necessity, be sacrificed At such times both more radical and more conservative surgery must often be practiced than would be deemed desirable in times of peace

Great stress has recently been laid by Reclus and other French surgeons on the value of systematic conservatism in the treatment of injuries of the extremities some of them going so far as to lay down the rule that no primary amputation should be done They believe that bleeding points should be ligated the injured parts irrigated dressings applied the general condition of the patient looked after and amputation if needed done later when the patient has recovered from primary shock and has accumulated strength with which to combat the dangers of anesthetic and operation Whenever the circulation of a part distal to the injury is at all fair, there is surely considerable reason for believing that the limb can be saved The brilliant work of Carrell and Guthrie in the anastomosing of blood vessels gives promise of something better in the future than has been known in the past for limbs whose main vessels have been divided The restoration of continuity of tendon and nerve has given most signal functional results in many cases Extensive laceration of the soft tissues combined with comminuted or other serious fractures constitute a most serious condition and one that will tax the care, the ingenuity and the skill of the surgeon in his attempt to restore anything like a normal condition The young and healthy individuals will have chances for a restoration of the circulation by the collateral vessels far in excess of the older patient whose circulatory capabilities are on the retrograde Both the radial and ulnar arteries of the forearm may be severed and yet the circulation be sufficient to save the limb, the femoral artery has been severed and yet the collateral vessels maintained the life of the member In all accident cases I try to give the patient the benefit of the doubt and make an earnest effort to save the limb, though it not infrequently happens that I have to resort to amputation later By carefully watching the patient and by the exercise of surgical judgment but little risk to life is assumed by the waiting Prior to 1877 amputation after compound fracture was the universal rule Volkmann was the first to secure satisfactory results by other means

The application of a tourniquet often seriously impairs the vitality of the part, especially so if the constrictor remains in position for any considerable length of time It is an easy matter to pick up and ligate most bleeding points A compress held in place by a bandage will control most cases of bleeding When possible to avoid it the tourniquet should not be used, as the deprivation of blood supply to the distal part entailed by its use exercises a most malign influence on the tissues The skin may be almost entirely stripped from a limb and yet the chances for restoration be excellent because the blood vessels are uninjured No matter how large the defect the covering can be restored by skin grafting It is always best to delay operation until preparations can be made to do the work by a carefully planned and perfected technic Two or three days' waiting can hardly do harm provided the limb is properly looked after Many advantages may be obtained by this delay The patient has ample time to recover from the primary shock and we can tell almost to a certainty whether or not amputation is required

Do not probe or disturb the interior of the wound before applying first-aid dressing If this does not control the bleeding apply tourniquet and blanket splint and get the patient to the operating room The ordinary methods of cleansing pursued are prone to carry much new infective material into the wound Scrub from, not toward the wound be careful not to allow soap water or other solutions to run into the wound while the limb is being cleansed Turpentine gasolin benzin or soap and water followed by alcohol or ether are all effective and their varying use is only a matter of choice Lastly I apply to the limb 0 5 per cent iodin solution I irrigate the wound thoroughly with hot normal salt solution

If the circulation is good and the condition of the patient warrants if the fractured ends of the bones are united by suture 30 day chromicized catgut of large size No 3 being preferred If wire is used it should be removed after it has served its purpose for the reason that any foreign body left in the tissues, of no

acts as an irritant Bronze wire is the best, having great tensile strength, iron wire is fair, but silver wire is too brittle to be of service Severed tendons are sutured, drainage provided for and splints applied On the other hand, if the vitality of the part is at all endangered there should be just as little interference as possible, useless manipulation may cause much injury to the soft tissues by the cutting done by the sharp fractured ends of the bone Drainage should be provided, the wound irrigated and the bones held in place by traction or splints or both Tendons, nerves and bones are better sutured some time later after the circulation of the part has been restored in a measure

When the fracture is comminuted or oblique, simple wrapping is probably one of the most effective methods of holding the fragments in proper position Plating is an excellent method of treating some varieties of fracture All detached bone fragments should be removed, as they will otherwise act as foreign bodies and promote suppuration Whenever possible the periosteum should be preserved so that regeneration of bone may take place The wound should be carefully searched for bits of foreign material, and one should see that no soft tissues are interposed between the ends of the bones When there has been much dirt contamination it is well to give an immunizing dose of tetanus antitoxin as a safeguard

The after-care of these cases is a great tax on the technical skill and ingenuity of the surgeon Splints and other appliances for immobilization are too numerous to mention or discuss, a sad commentary on their unsatisfactoriness The problem of immobilization requires much ingenuity, since no treatise, however complete, can give directions that will cover every contingency that may arise The varied requirements are practically innumerable Prevention of motion with fair approximation and apposition of the bone ends must be secured if possible Frequent changing of the splint in compound fractures has its serious disadvantages and should be overcome if possible Where there is much mobility an excessive amount of callus will form and may include and press on some important nerve trunk A fenestrated plaster dressing suits many of these cases and it can be protected from the wound discharges by some of the numerous methods in vogue A few of these cases, those that are strictly clean and can be kept so, are better off without drainage Most are infected either by the accident or the treatment, as the opportunities are many and the susceptibility great. Men doing referred practice sometimes blame the physician who gave the first aid for the infection The wound is often infected before the case is seen by a physician, the conditions often being such that infection is unavoidable, being carried in at the time of the accident from the skin or clothing or from the traumatic agent

Most of these cases need drainage and gauze strips are usually effective except for hemostatic purposes Rubber tubing (split or fenestrated) is not only satisfactory as drainage, but is a great convenience when we wish to irrigate the wound These drains should be placed, whenever possible, so as to get the assistance of gravity Infected wounds should have ample provision for drainage and irrigation When there has been extensive laceration of the skin and muscles it is best not to attempt to close the wound completely There is great liability to suppuration because of the lowered resistance of the traumatized tissues and by reason of the excellent culture media furnished by the extravasated blood and serum and the frequency of initial infection

I have discontinued the use of peroxid of hydrogen and have never used a bichlorid of mercury solution in the irrigation of wounds I am satisfied that both promote rather than decrease wound secretion Warm normal salt solution is a good mechanical cleanser and is non-irritating to the tissues A weak solution of iodin is possessed of a maximum bactericidal power combined with a minimum toxic and irritant effect It not only has a destructive effect on pus germs, but to a great extent will seal the ends of the lymphatic and blood vessels against the absorption of septic material

The fractured ends of the bone may give trouble by necrosis, in which case the necrosed bone may be removed from time to time without much difficulty In gangrene without infection amputate at the point of fracture and regulate those of the stump later In gangrene with infection removal of tissue must be radical and extensive The after care of many in these cases is tedious and prolonged Necrosed bone will have to be removed from time to time There will often be chronic suppuration and the patience of both operator and patient will be severely tried In cases in which trauma has been severe sloughing will usually be extensive and infection almost certain Antiseptic solutions should not be used on bone, as they are very destructive to the periosteum

There are certain disadvantages that may accompany the retention of crippled limbs, such as contractions of tendons and fascia, ankyloses of joints, chronic edema from inclusion of blood vessels in callus or scar-tissue, and disturbances of innervation from pressure on nerve trunks, and the treatment is lengthy and expensive On the other hand, the expense of an artificial limb is saved, contractions and joint stiffness may be largely prevented and overcome by passive motion Complete ankylosis has been relieved and the joint made mobile by the plastic interposition of fascia between the bone ends, brilliant results have been achieved in nerve surgery even after the lapse of many years from the time of the accident, and tendons are transplanted or anastomosed with ease True amputation gives in most cases far quicker results, but who does not prefer the arm or leg God gave to some clumsy device contrived by man?

Trauma of joints is often followed by infection Open treatment by irrigation and packing with iodoform gives good functional results though ankylosis is apt to result There is an increasing tendency on the part of men who have successful technic to resort more and more to the open treatment of joint injuries and fractures Bier's method for the production of artificial hyperemia has saved many joints from resection

With a view to the illustration of the deductions I have made from a study of the subject I have selected the following from a large number of that class of cases, all were notably bad and looked to be fit subjects for amputation

CASE 1—D M, male, aged 22, was referred to me by Dr C N Watts, Dothan, W Va

History—The man had been shot in the left leg at about the junction of the upper and middle thirds by a Winchester rifle, the ball struck the tibia squarely and produced a badly comminuted fracture An occlusive dressing with splints was applied and the man kept in his shanty in a railroad camp with the hope that healing would take place After six weeks of this, suppuration not only of the wound but of the entire leg below the knee had become so general that amputation was considered to be the only means of saving the man's life At the time the patient came to the hospital he had severe chills fever and sweats, but I decided to make an attempt to save the leg

Operation—Under general ether anesthesia the wound was opened, cleansed and several fragments of dead bone removed, four long pus cavities were opened freely, irrigated and drained These cavities lay in general in the direction of the muscle planes and were connected by sinuses with the original wound One of them extended some distance above the knee joint into the thigh Neither the ankle nor knee joints were involved. Under frequent dressings and irrigations some improvement of the leg was manifested, but during the next three months the patient had to be twice anesthetized and new sinuses opened

Result—At the end of the tenth week after admission to the hospital, the sixteenth week after the receipt of the injury, there was bony union and the patient was put on crutches. In a month he was walking in a limping manner, but the original bullet wound had not yet closed The leg was painful when much used Two subsequent operations had to be done for the removal of carious bone These cavities finally filled and at the end of the tenth month of hospital residence he left, well, with a straight, sound leg, capable of earning his own living and not likely to become a public charge

CASE 2—D A P, male, was referred by Dr J R. Pharr, Dunloop, W Va

History—This man had received the full load of a shotgun at short range in the region of the great trochanter on the left side, a large part of the load entering below that point, producing a comminuted fracture of the femur The shaft of the femur was split by an oblique fracture eight inches long The outer portion of the trochanter was shattered and the neck of the femur split in half, the separation extending inward as far as the head of the bone The injuries to the soft structures were most extensive, the flesh being badly lacerated and torn Shotgun wadding, bits of clothing and fragments of bone were most plentiful in this wound

Operation—My first thought was to do a hip joint amputation, but I decided to try more conservative treatment Considerable time was spent in suturing the bones into some semblance of their former shape The wound was put in as good condition as possible, iodoform gauze was plentifully packed into the gaping cavity and a long well padded side splint applied Great care was taken to prevent wound suppuration Union was good, the injury to the muscles filled by granulation, and the patient left the hospital at the end of the ninth week, well

CASE 3—F B, male aged 21, a saw mill employé

History—Patient fell so that his left arm came in contact with a rapidly revolving circular saw Two and one half inches below the elbow the forearm was more than two thirds sawn in two The radius was cut entirely in two and the articular end of the ulna was torn completely out of the elbow joint and projected backward past the angle of the elbow for at least two inches He was brought to the hospital about three hours after being injured and was operated on soon afterward

Operation—The wound was irrigated with saline solution, the fractured ends of the radius were wired and the elbow luxation was reduced The wound was closed with the exception of a small drainage opening and the arm immobilized in a right angled splint Healing was primary and passive motion was begun at the end of the second week Results were perfect and the man now has a normal arm with no elbow ankylosis whatever

CASE 4—G H W, Olcott, W Va, was referred to me by Dr W W Tompkins, Charleston, W Va

History—This man had been severely struck on the left elbow in an accident The arm was terribly swollen, crepitation in region of the elbow joint could be made out and not much else

Operation—I made an incision lateral to the joint and found that the component bony parts of the joint had been crushed I resected the broken end of the ulna, also the articular head of the humerus which was fractured entirely across its diameter Through and through drainage was maintained for a time A useful arm capable of a considerable range of motion was the result

CASE 5—H B was referred to me by Dr S M Stone, Huntington, W Va

History—The patient had a Pott's fracture of the right leg, also a compound fracture of both tibia and fibula about the junction of the upper and middle thirds The injuries to the soft tissues were extensive, there being large lacerations and ecchymoses

Treatment—The wound was drained and the bones held in position by splints A large area of the skin sloughed. Edema of the ankle and foot was severe and persistent, and associated with the formation of blebs The bones finally united, the uncovered areas were repaired by skin grafting, and six months later the patient possessed a fairly useful limb

CASE 6—C H., white, adult male, victim of a mine accident, referred by Dr J F Bowles, Ward, W Va, had a compound fracture of both bones of the leg midway between knee and ankle, with extensive lacerations of skin and muscles, the lower end of the tibia was projecting from the wound

Treatment—The wound of four or five hours' standing was irrigated and the displaced bones reduced Splints were applied Despite the use of splints and extension it was impossible to keep the bone ends in apposition A week later the bones were united by suture and rubber tube drainage through the leg was established There was considerable sloughing of the soft structures and an area of four inches of the anterior surface of the tibia was exposed The bone surfaces were rapidly covered by granulations until only an inch of the lower fragment was bare There was considerable infection The temperature for the first ten days often reached 103 F in the afternoon, later it seldom rose above 100 5 F, and by the end of six weeks it had reached normal At the beginning of the thirteenth week the patient had a severe chill and his temperature suddenly rose to 104 F Two days later a beginning abscess was discovered in the calf of the leg and opened Union was then excellent and the patient was able to bear considerable weight on the leg when walking Thirteen weeks after the original injury a piece of necrosed bone 3 inches long by 1¼ inches wide at the upper end and ½ inch wide at the lower end was removed from the lower fragment of the tibia The wound is nearly healed and except for a little stiffness in the ankle joint the prospects are good for complete recovery

CONCLUSIONS

1 The conservative treatment of severe injuries to the arms and legs is essentially modern, and we should not do primary amputations (except in case of a limb held by only a few shreds), but wait for shock to pass and for the patient to regain strength

2 We should avoid the use of antiseptic solutions for irrigation and use instead normal salt solution

3 Bones should not be permanently sutured and we must not be in too great a hurry nor attempt too much in the beginning

4 Moist gangrene calls for radical treatment

5 Drainage is usually necessary and the rubber tube is to be preferred

6 Good functional results may be obtained against great apparent odds and a saved limb is preferable to an amputation stump

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Therapeutic Power of Mental Effort—Dr F T Seybert, Council Bluffs Iowa, states that the therapeutic power of mental remedies is best illustrated in the treatment of functional nervous disorders especially when associated with mental symptoms A natural susceptibility which is one of the strongest factors in the etiology of these disturbances becomes when judiciously managed a means by which curative action can be aroused—so sure is Nature in compensations In neurasthenia above all other diseases there is no prescribed routine of treatment its diverse causes and varied nature would prohibit this All remedies which have any bearing and all influences are sometimes relied [illegible] who has the clearest insight and the [illegible] rising ways and means will be the most [illegible] of occupation is often beneficial and [illegible] tion employment of the mind [illegible]

If fresh buttermilk can not be obtained it may easily be made at the patient's home. The following is the method used at the Philadelphia Hospital. A quart of fresh milk is poured into a sterile pitcher and a sterile towel tied over the top of the pitcher to prevent the entrance of dust. This milk is allowed to stand for twenty-four hours in the room, at ordinary room temperature (65 to 70 F.), and at the end of that time all the cream is skimmed off. This sour milk is placed in a small glass churn of one quart capacity and churned for fifteen minutes; it is then removed from the churn and placed on ice until the nurse is ready to prepare the buttermilk mixture. I have examined buttermilk made in this way and found it to contain 1 per cent. of fat. Buttermilk should be used within twenty-four hours after being made.

Plain buttermilk was not given, but the babies I report were fed routinely on a mixture of wheat flour, cane sugar and buttermilk in the following proportions: Buttermilk, 1 quart; wheat flour, 3¾ teaspoonfuls; granulated sugar, 15 teaspoonfuls. A farina boiler, that is a double boiler, is the best receptacle in which to prepare the food. First, carefully mix the flour and sugar with a few spoonfuls of the buttermilk until a smooth paste results. All lumps should be completely smoothed out. The balance of the buttermilk is then added. This mixture is now heated to the boiling point (212 F.), but must not be boiled or it will curdle; it is also essential that the milk be constantly stirred during the entire process or it will curdle.

If a thermometer is not used, at the first sign of bubbling the milk is removed from the fire and rapidly cooled. It is best now to bottle the food, but in dispensary practice if the patients can not afford enough bottles for the entire day the buttermilk should be placed in a pitcher or jar which has been scalded and placed on ice. Before taking out the milk for each feeding the buttermilk mixture must be carefully stirred, as on standing it separates and the flour falls to the bottom of the vessel. It will be noticed that no water whatever is added to this mixture.

I report the cases of twelve infants; these are all I have fed up to date on buttermilk. I wish also to state that I have not selected cases which would be expected to do well, but with the exception of two cases of acute enteritis, which were put on buttermilk at their first visit, in every case regular milk mixtures were carefully tried but without success, before the infants were given buttermilk. Five of these cases were in the baby ward of the Philadelphia Hospital and seven in the dispensary of the Children's Hospital of Philadelphia.

First I will report the cases of five babies in the Infant Asylum.

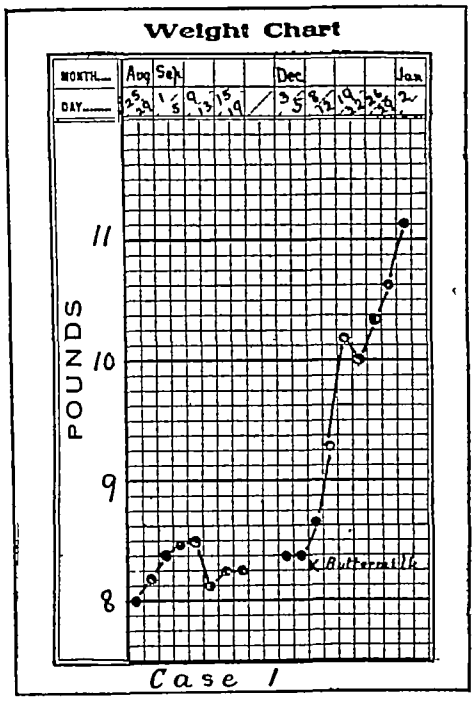
CASE 1.—M. M. was admitted to the Philadelphia Hospital when 3 weeks old. For a few weeks the infant was breast fed, but as it lost in weight, it was put on a milk mixture alternating with the breast. The baby gained only eleven ounces in three and a half months. By this time the child had a well developed case of marasmus, the four months' old infant weighing only 8 pounds 11 ounces, and its evacuations showed undigested food. It was now put on the buttermilk mixture and in three days the stools were normal and the infant had gained ten ounces, in ten days it gained 1¼ pounds, or an average of 2½ ounces a day. In the three and a half weeks during which it took the buttermilk it gained 39 ounces, or 11 ounces a week.

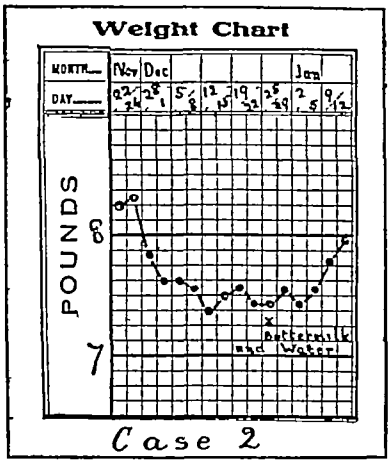
Before taking the buttermilk this baby gained only 11 ounces in 3½ months, but after taking it gained that amount each week. This is an unusual result in a case of infantile atrophy confined in a hospital from 3 weeks of age to the age of 4 months.

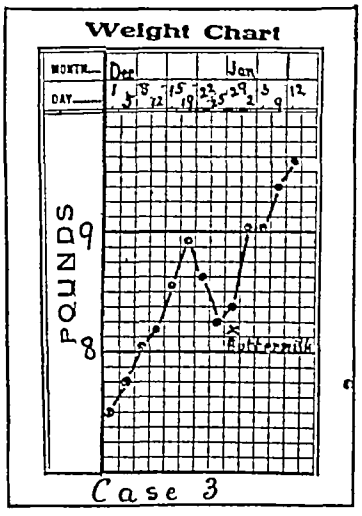
CASE 2.—C. S. was admitted to the Philadelphia Hospital when 9 hours old. This new born baby was fed on a regular milk mixture for four weeks, in which time it had lost 14 ounces and had developed a severe gastroenteritis, vomiting after each feeding and showing undigested food in the stools, together with a large quantity of mucus. When one month old it weighed 7 pounds 7 ounces, and was put on the buttermilk mixture 1 ounce and water 1 ounce. In three days, as vomiting ceased and the stools showed that the food was properly digested, the baby was put on 2 ounces of the buttermilk mixture undiluted. As it did not digest this, the stools containing curds, it was put back on one-half buttermilk and one-half water and again improved. In three weeks after taking the buttermilk the infant had gained 9 ounces, or 3 ounces a week, and the stools were much improved.

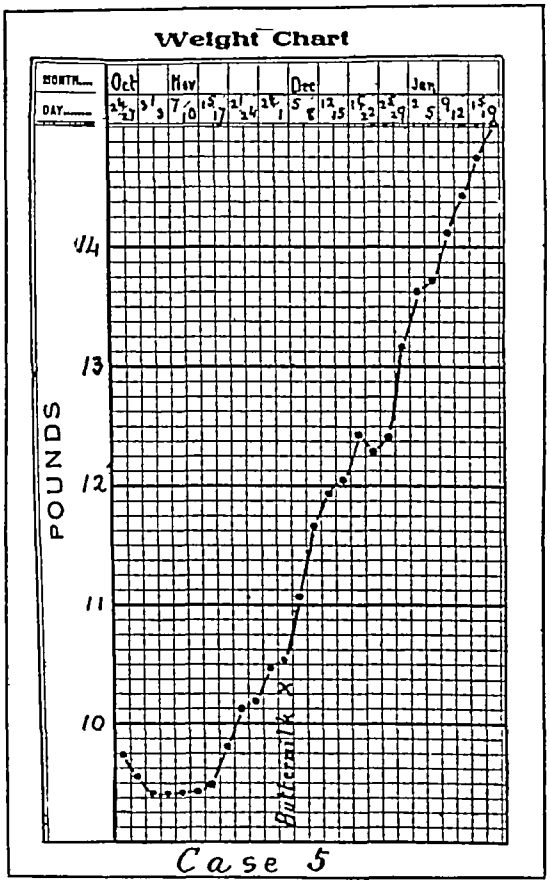
To recapitulate, a new-born baby, in an institution, artificially fed on a modified milk mixture, developed a gastroenteritis and lost rapidly in weight until given buttermilk, when improvement in digestion occurred and slight gain in weight. But for the mistake of putting this infant on buttermilk undiluted I believe the improvement would have been much more rapid.

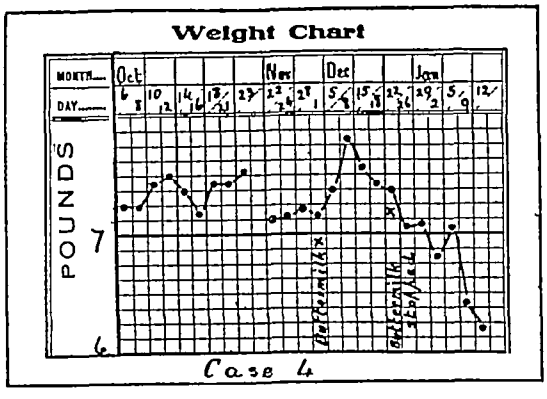
*Read at the meeting of the Philadelphia Pediatric Society, Feb. 9, 1907.

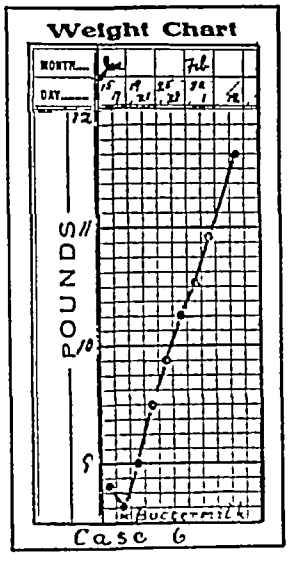


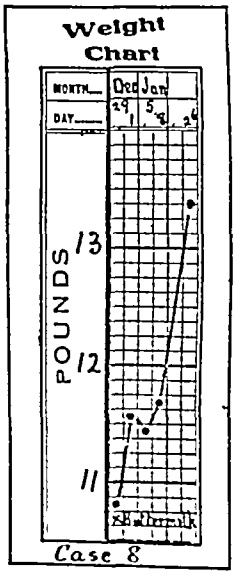












CASE 3.—F. T., a foundling with infantile atrophy, had been in the baby ward of the Philadelphia Hospital for three and one-half months when it came under my care. It was then 5 months old, weighed 7 pounds 8 ounces and was taking 5 ounces of a 3-6-1 mixture.[1] Since it had been in the hospital it had lost 1 pound 3 ounces. At my first visit I changed its formula to a 3-6-1.25 mixture, 6 ounces every third hour. In the next two weeks the child gained 11 ounces but at the end of this time it began vomiting after each feeding. The percentage of fat was cut down, and the child put on a 2-6-1.5

1. Throughout this paper when the percentages of different ingredients in a milk mixture are given it must be understood that fat, sugar and proteid are arranged in the order here stated. For example, a 3-6-1 mixture refers to 3 per cent. of fat, 6 per cent. of sugar and 1 per cent. of proteid.

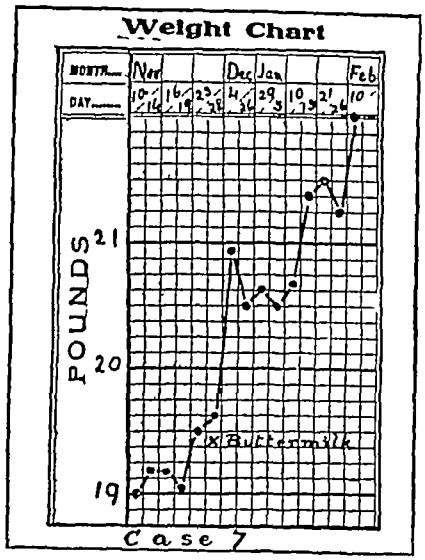
mixture, with the addition of sodium citrate (one grain to each ounce of milk and cream in the mixture) Ten days later the baby vomited less frequently and the formula was changed to a 2 6 1 75, with sodium citrate Two days after this the baby vomited large curds after each feeding, and the stools became yellowish green with curds The baby had lost 6 ounces in the three days The milk mixture was discontinued, and barley water was given for twenty four hours, followed by whey for forty eight hours, but as there was no improvement in three days, infant was put on the buttermilk mixture, 4 ounces every three hours The next day there were no more curds and the stools were normal He took the buttermilk well, and only vomited twice. The quantity was then increased to 5 ounces every three hours Twelve days after buttermilk was started, vomiting had entirely stopped The stools were normal, and baby had gained 18 ounces, or an average of 1½ ounces a day since taking the buttermilk

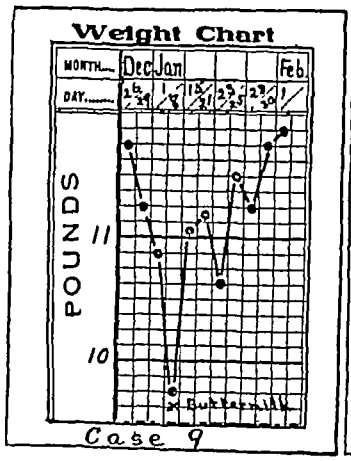
It would certainly be hard to find a more severe test to apply to any food than the test buttermilk was subjected to in this case In brief, a 7-weeks-old foundling remaining in an asylum 3½ months developed infantile atrophy with gastroenteritis Was put on buttermilk and a rapid recovery followed

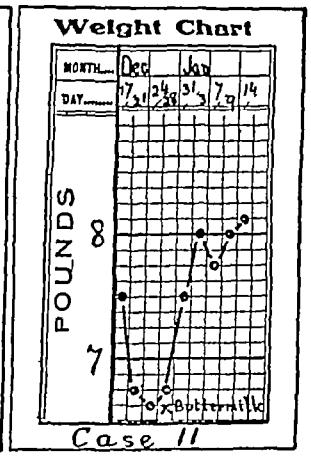
CASE 4—C W W, born in the maternity of the Philadelphia Hospital, and was breast fed until transferred to the baby ward at the age of 6 weeks, weighing 7 pounds 2 ounces It was fed on barley water 1 ounce and whey 1 ounce, with one grain of sodium citrate, but the stools were green with curds and mucus and the baby losing slightly in weight Put on buttermilk 3 ounces every two hours, in three days the infant gained 3 ounces, the stools were dark brown, with a few small curds, having noticeably improved By the end of the first week baby had gained 10 ounces and stools were yellow and well digested But on the eighth day child began vomiting and continued vomiting after every feeding The infant became very much worse, and stools became green with curds Put on one half buttermilk mixture and one half water, but did not improve, losing rapidly in weight Vomiting persisted in spite of daily lavage Buttermilk was discontinued and patient put on plain whey plus sodium citrate, but it lost even more rapidly than while taking buttermilk

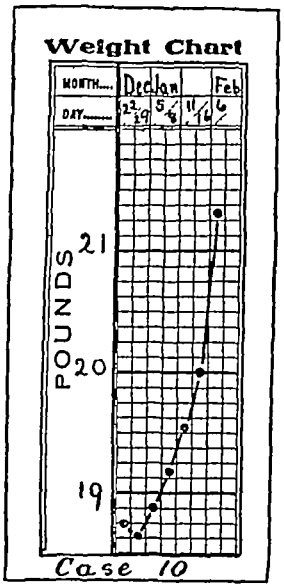
This baby was a typical case of the atrophic type seen in foundling asylums, who almost always develop acute gastroenteritis and die The child was born in the institution and weighed at birth 7 pounds 4 ounces Two months later, before given buttermilk, he weighed an ounce less than at birth Buttermilk was given for three weeks, the first week the baby gained 12 ounces and in the second and third weeks together he lost 8 ounces After the child was taken off buttermilk it went rapidly down hill

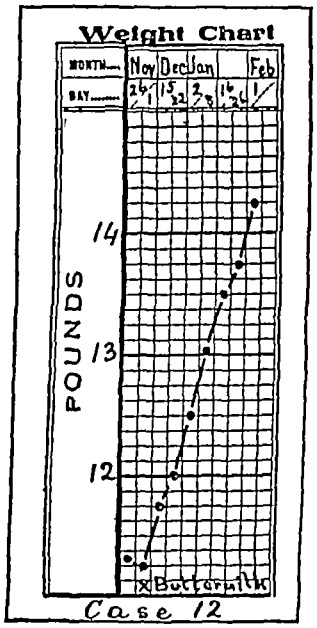
CASE 5—P B B, aged 3 months when admitted to the Philadelphia Hospital Four weeks after admission the infant developed an acute enteritis It had been taking a 3 6 1 mixture, but now refused its feedings, up to this time it had gained 2½ ounces a week since admission It was now put on buttermilk, and in twenty four hours the stools were greatly improved, although previously they had been full of curds, they were now well digested The baby took the buttermilk well and retained all of each feeding In one week, beside having normal stools, the baby gained 1 pound 2 ounces At the end of the second week, 2 drams of 16 per cent cream were added to each feeding (approximately 1 per cent of fat) A few days after the cream was added the baby began to vomit and the stools showed undigested food, containing curds and mucus The child also lost 2 ounces in weight The cream was discontinued and the baby ceased vomiting and the stools improved Again in three days the buttermilk was increased to 5 ounces and 1 dram of cream (16 per cent) added Four days after this the stools were perfectly normal, yellow, and showed good digestion Taking and retaining its feedings the child gained over 3 pounds in four weeks, or an average of over 12 ounces a week.











It should be remembered that this infant could not digest 1 per cent. of proteid in a regular milk mixture, but was able to digest the 2 per cent to 3 per cent of proteid in the buttermilk I consider this an unusual result, especially when we remember this baby had been in an infant asylum for two months

The reports of these five cases unfortunately cover only a short interval of time. My service expiring, I was unable to treat them for a longer time The following are dispensary cases

Case 6—L M, aged 7 months, was brought to the dispensary Jan 14, 1907, weighing 8 pounds 13 ounces This was a case of infantile atrophy The child had been fed on the breast, alternating with the bottle (¾ milk, ¼ water) Baby had not thrived since birth, always had colic with constipation. Mother gave her infant magnesia daily to relieve the constipation Baby vomited frequently, both breast and bottle milk, while the stools contained curds The infant was put on a milk mixture, but in three days, as it continued to lose in weight, and the bowels had not improved, it was put on the buttermilk mixture, 4 ounces every two hours, and given the breast twice during the night. Two days later the infant had gained 6 ounces The stools were still green and offensive, but contained no mucus or curds Baby had not vomited, so the buttermilk was increased to 5 ounces every two and one-half hours Two weeks after taking buttermilk the child was perfectly well Its stools were normal, and it was taking 7 ounces of the buttermilk every three hours It had gained 36 ounces in the two weeks, or over 2½ ounces a day

To repeat An infant, 7 months old, weighing 8 pounds 13 ounces, suffering from infantile atrophy and with a chronic gastroenteritis, was put on buttermilk The stools rapidly became normal, the child gaining 2½ ounces a day This infant retained and digested buttermilk, but it could not digest or retain its mother's milk or a regular milk mixture

Case 7—C J, aged 15 months, was brought to the dispensary Nov 7, 1906, suffering from chronic intestinal indigestion This infant had been on condensed milk in the proportion of 3½ drams to a teacupful of water About four weeks before coming to the dispensary the baby had two weak spells, probably convulsions From that time on she was feverish at night, and the bowels continued loose, with curds in the stools To be brief, the infant was brought regularly to the dispensary for three weeks before I put it on buttermilk, and during this time I was unable to feed it successfully This 15 months' old infant could not even digest 1 75 per cent of proteid in a skimmed milk mixture. I have never seen a child pass such large tough tenacious curds as this infant did The stools were also green, contained mucus, and were very offensive. In twenty four hours after taking the buttermilk mixture the character of the stools was entirely changed They showed good digestion and were absolutely free from curds The infant's colic, which before taking buttermilk had been very severe, ceased In six days the baby gained 21 ounces, or 3½ ounces a day and the stools were normal Then the mother neglected to bring the child for three weeks, and as it lost 7 ounces in weight, one dram of 16 per cent. cream was added to each feeding of 8 ounces of the buttermilk mixture (approximately ¼ per cent of fat) Even this small quantity of cream had to be discontinued in two days, as the bowels became loose and the stools watery The child tired of buttermilk in three weeks and would take only two or three ounces at a feeding so broth and white of egg were added to its diet, and a few days later, scraped meat and orange juice. The baby's bowel movements continued to show good digestion, but averaged four or five a day and still contained some mucus.

For months this child had eaten dirt and had been discovered eating coal dirt and ashes out of the coal-scuttle It could not be expected that this child now 1½ years old, would continue gaining on simply buttermilk, but as a temporary food in this case its effect was most striking, the improvement, as soon as it was put on buttermilk, was really wonderful

Case 8—J C, aged 5 months, was brought to the dispensary Dec 26, 1906, with acute intestinal indigestion and rachitis The infant had been fed since birth on condensed milk (½ teaspoonful of condensed milk in 4 ounces of water) Its mother said the baby had never been sick until four days previously, when diarrhea set in with much tenesmus The stools were green, offensive, and contained a good deal of mucus The baby was put at once on the buttermilk mixture, 4 ounces every two and one-half hours, and in twenty four hours was much better, the diarrhea was less and the stools were becoming normal In three days the child gained 12 ounces, and the stools were normal, although four a day The infant was not brought to the dispensary for eighteen days, and in that time it gained 27 ounces The baby's general condition was excellent, two normal evacuations daily and no vomiting It was put on 5 ounces of buttermilk and 1 dram of 16 per cent cream every three hours After taking the buttermilk this baby gained 41 ounces in five weeks, or 8 ounces a week

This infant, having acquired rickets from being fed on condensed milk for five months developed an acute enteritis but without putting the child on barley water for 24 hours, as I generally do in similar cases I placed this baby directly on the buttermilk mixture and it began immediately to improve This case illustrates the value of buttermilk in acute intestinal disorders in infancy

Case 9—E A, aged 5 months, was brought to the dispensary Dec. 26, 1906, weighing 11¾ pounds This was an atrophic infant with a moderate degree of rachitis The patient had been breast fed until 3 months' old, when it was put on condensed milk, which failed to nourish it, and then on a modified milk, approximately a 4 7 1 25 mixture For five days before coming to the dispensary the infant had been vomiting after each feeding Bowels moved three or four times a day and there were always curds in the stools, there was much colic and flatulence After taking barley water for twenty four hours the child was put on a 3 6 1 mixture alternating with the breast One week later, as the mother had plenty of breast milk, the infant was put on breast milk exclusively In one week on breast milk it lost 1 pound 2 ounces In the two weeks it had been coming to the dispensary it had lost 2 pounds It was now put on the buttermilk mixture, alternating with the breast At first it gained rapidly but colic continued and in a week it lost some that it had gained The breast was then discontinued entirely except during the night, and the child gained once more A week later, it again lost in weight and developed all the symptoms of hereditary syphilis It was placed on an anti syphilitic treatment and then gained in weight In the three weeks this atrophic rachitic syphilitic infant gained 2 pounds, or 10 ounces a week

This baby could not digest a 3 6-1 mixture or its mother's milk, and lost rapidly while taking them It improved when buttermilk was given alternating with the breast but it improved still more when fed on buttermilk exclusively

Case 10—J M aged 14 months, was brought to the dispensary Dec 11 1906 with an entero colitis The infant had been passing blood in its stools for three weeks and having bowel movements seven to eight times daily The stools were green and besides blood, contained mucus and curds The child had been fed on condensed milk 1½ ounces to 6 ounces of water This infant was put immediately on the buttermilk mixture, 6 ounces every three hours, without the usual twenty four hours on barley water In forty eight hours the stools were still green but contained no curds nor blood The infant at this visit weighed 18¾ pounds Three days later the child developed an acute bronchitis and its bowels moved four or five times a day the stools containing mucus At the end of the first week the infant had lost one ounce It was then ordered 8 ounces of buttermilk and 2 drams of 16 per cent cream At the end of the second week the baby had gained 8 ounces but stools contained some curds and were green and offensive At the end of the third week the patient had gained 13 ounces more and its stools showed good digestion Six weeks after taking the buttermilk mixture the stools were perfectly normal and the infant's weight was 21 pounds 5 ounces or a gain of 42 ounces, 7 ounces a week.

Remember this child had had for 3 weeks an intense enterocolitis which was increasing in severity and at the first visit it was placed immediately on buttermilk I did this in order to put the buttermilk to a very severe test, and in 24 hours there was a marked improvement in the character of the stools

CASE 11—C C, a 3 months' old baby, was brought to the dispensary Dec. 17, 1906, with infantile atrophy It was breast fed until 6 weeks old, after which time it was fed on a predigested milk mixture, approximately a 1 5 6 1 mixture The baby since being fed on this mixture had always been constipated, until three days before coming to the dispensary, when its bowels became loose, the stools showing undigested food and there was much flatulence and colic The child weighed when first seen, 8½ pounds, but the mother said it used to weigh 9½ pounds The infant was given a dose of oil and put on albumin water for twenty four hours, and then on a 3 6 0 75 mixture In one week the patient lost 14 ounces, and the stools were loose, green, contained curds, and were offensive Baby vomited after each feeding It was then put on buttermilk and in three days it gained 12 ounces The baby's general condition improved greatly and its bowel movements showed good digestion, but it still vomited a little In one week the child gained 1 pound 4 ounces Four days later baby had lost 4 ounces because the mother had been unable on two days to obtain buttermilk, so she put the baby on the milk mixture she had given it before coming to the dispensary The infant was only brought a couple of times after this, it was gaining slowly, but as the mother said she was unable to obtain buttermilk every day, she returned to her home in the central part of Pennsylvania, where she could get plenty of fresh buttermilk

I do not consider it fair to attribute the slow gain during the last two weeks this case was under treatment to buttermilk, as it was not given every day Nevertheless, the average gain in weight for the three weeks while coming to the dispensary was 8 ounces a week

This baby could not digest 75 per cent of calcium casein, the proteid as it occurred in the milk mixture that the child was taking before it was put on buttermilk, but at once it fully digested the 2 per cent to 3 per cent. of casein lactate in the buttermilk mixture

CASE 12—M K., a 3 months' old rachitic infant, who had been fed since birth on too strong a milk mixture, and in consequence had indigestion It was put on a weaker mixture, but indigestion continued and the infant failed to gain in weight losing 1 ounce It was now put on the buttermilk mixture and the stools changed immediately, becoming smooth, yellow and well digested The child gained 8 ounces the first week on buttermilk, and continued gaining for two months Up to the date of writing it had gained 3 pounds, or in other words 6 ounces a week, it's weight then being 14¼ pounds

This case is an example of an infant developing rickets and losing weight on too strong milk mixture, with fat and proteid indigestion. Improving immediately on buttermilk, gaining constantly and rapidly

In order to give this mixture of buttermilk, cane sugar and wheat flour a fair trial, I purposely did not modify it, but used the whole buttermilk in every case, with two exceptions There were two cases in which I diluted the buttermilk one-half with water These were the only patients that did not perfectly digest the proteid of the buttermilk. Both were asylum infants, one was the 1-month-old baby, and the other the case of marasmus that was not successfully fed on buttermilk or on anything else

The one way I did modify it, which is essential if the child is to be kept on buttermilk for any length of time, was by the addition of fat in the form of cream The cream was added just as soon as it was thought the infant needed fat in its diet and could digest it At first one-quarter of 1 per cent. of fat was added, and if this was taken well the amount of fat was increased one-half of 1 per cent at a time as rapidly as possible For instance, if the child was taking 4 ounces of buttermilk, 2 drams of 16 per cent cream was added to each feeding

SUMMARY

The twelve infants reported varied in age from 1 month to 15 months old The average gain in weight of the five babies treated in the Philadelphia Hospital was 7½ ounces a week The average gain in weight of the seven babies treated at the dispensary was 8¾ ounces a week

The average gain in weight of the entire twelve infants fed on buttermilk was 8 ounces a week

This gain in weight is particularly of interest for the reason that every one of these twelve cases were seriously ill at the time they were put on buttermilk I would call special attention to the five babies in an infant asylum, whose average gain was 7½ ounces a week

CONCLUSIONS

One advantage of buttermilk in dispensary practice is its inexpensiveness, costing in Philadelphia only 5 cents a quart

I believe fresh buttermilk a most excellent temporary food for infants suffering from intestinal indigestion, enteritis and marasmus

I have observed no unpleasant effects from the administration of fresh buttermilk, infants almost invariably take it well

A few of these infants, when first put on buttermilk, vomited slightly, but in every case this ceased in a day or two, with one exception (Case 4)

Finally, the point I wish to emphasize from my brief experience is, whatever success has attended the use of buttermilk, is not so much due to the absence of fat as to the great ease with which the proteid of buttermilk is digested I have had the opportunity to observe this in almost every one of my cases Several who were unable to digest 0 75 per cent. of calcium casein digested perfectly the 2 per cent to 3 per cent of casein lactate in the buttermilk

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THE PROBLEMS OF CAR SANITATION *

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The railway had long ago reached such a stage of activity in America that its sanitary problems became of importance It was not until very recent years, however, that these problems were adequately or at all generally discussed The rapid development of the means of travel gave us a new set of sanitary questions. These have been in part answered in the papers by Bracken,[1] Hurty,[2] Conn,[3] Dudley,[4] Trask,[5] Rosenau[6] and others

* Read at the annual meeting of the American Public Health Association Mexico City December 1906

1 (a) Sanitation and Its Bearing on Certain Railway Problems, The Railway Surgeon September 1903 (b) Infection in Transportation Am Med Aug 12 1905 (c) A Few Points Relating to Car Sanitation Rep of Am Pub Health Assn 1905 xxxi

2 (a) Passenger Coach Sanitation The Railway Surgeon Oct. 16 1900 (b) Railway Sanitation Ohio San Bull 1906 (c) Internat. Jour Surg May 1902, p 155

3 (a) Report of Com on Car Sanitation Reports of Am Pub Health Assn 1903 xxix (b) Internat Jour of Surg May 1902 p 152.

4 (a) The Dissemination of Tuberculosis as Affected by Railway Travel Med News Dec. 16 1905 (b) Passenger Car Ventilation System Altoona 1904 (Pa R R. Co)

5 The Dangers of Unrestricted Traveling of Consumptives Jour of Assn of Mil Surg 1905

6 Internat Jour of Surg May 1902 p 157

That the problems presented have not yet been solved in all their relations, however, is amply proven by the great diversity of opinion still held by sanitary experts Further investigation is needed It is desirable to know many facts difficult of determination But in the working out of new sanitary problems frequent orientation is necessary in order to keep them in their right relations, to apply the general principles of sanitary science, and to prevent confusion of the major and minor questions at issue I wish to make a brief inquiry into the dangers which railway travel may hold out to the public health and to measure the influence of car hygiene in averting these dangers

This inquiry may be directed under three general headings First, the danger arising from the mechanical accidents, second, the danger of contracting infectious diseases, third, the danger incident to a group of miscellaneous influences, such as the rapid and variable motion, faulty ventilation, heating and lighting of cars, and the breathing of dust, smoke and engine gases

DANGER FROM MECHANICAL ACCIDENTS

First.—Though the first of these items—the danger from mechanical accidents—is, in its ultimate analysis, the most important, and in the broadest sense a sanitary problem, we may, for the present purpose, leave it out of consideration In the nature of things the professional sanitarian has little to do with the measures taken to prevent such accidents They are the special concern of the railway management, and require neither the knowledge nor the training of the physician to properly interpret and understand The economic consideration which they involve may be trusted almost alone to work out their remedy

DANGER FROM INFECTIOUS DISEASE.

Second —The liability of a passenger to acquire an infectious disease during his period of travel, while a more intangible danger, is one, the protection from which is the sanitarian's special interest, and its correct interpretation requires all his technical training and his knowledge of technical facts It covers most of the important problems of our sanitation, strictly interpreted

We may profitably divide our consideration of this phase of the subject also into three parts 1, The danger of infection through association, that is, by direct contagion, 2, the danger from the use in common of the facilities for comfort and convenience, 3, the danger from the infected car

1 The association of any considerable number of persons in any confined space renders each one a possible victim of the contraction of a contagious disease This holds true in the railway coach in the same degree that it holds true for other public places It is increased by the railways only to the extent that they facilitate intermingling That the average danger is in general slight and is not worthy of exerting any deterrent influence on social intercourse or travel seems to be a generally accepted opinion It is nevertheless probable that such association is responsible for a very large proportion of the ordinary acute infections, and particularly of those affecting the air passages

It is, of course, desirable that every effort should be made to limit as far as possible the association of the diseased with the healthy in public places The only obvious way to accomplish this is to deny to the sick the right of mingling with the well In case of smallpox scarlet fever, measles, diphtheria and a few other manifestly contagious diseases we do this, depriving the affected individual of his liberty if necessary to insure his isolation But a host of other infections, which may under certain circumstances become directly communicable, are allowed to associate at will Consider for instance, influenza, a disease usually prevailing in epidemic form, spreading with such remarkable rapidity as to leave no doubt of its extreme contagiousness Produced by a bacillus known to have very little resistance to desiccation, sunlight and unfavorable temperatures[7] to exist in large numbers in the sputum and nasal secretions of the infected, the disease is transmitted directly from man to man, and chiefly, it is supposed, by means of infected droplets expelled in coughing and sneezing Those afflicted with influenza are very often still well enough to go about their business and their travels and thus be spreaders of the infection Again, it has long been recognized that mild and atypical cases of various contagious diseases are by no means rare That scarlet fever may have no eruption, mild sore throat be really diphtheritic, that even smallpox may be mild and unrecognized, are facts which have been well established during the last decade Indeed, we know that there is a vast number of people with unrecognized contagious disease who go about in apparent health spreading their infection Furthermore, it is well known that virulent organisms may continue to be produced in the bodies of those infected for weeks or months after recovery from the disease, and that pathogenic organisms are frequently found even in those who have never been sick at all How, then, is it possible to escape from the dangers incident to association? It is not possible to exclude the infected but only the sick, and whoever is able to go about with the appearance of health will continue to be our fellow traveler

How far is the railroad able to aid in preventing contagion from this cause by contributing to the desirable segregation of the diseased from the healthy? Dudley[4](a) has defined the situation so clearly that I quote in part his words

" It may be urged that the railroads have no right to expose their healthy passengers to the danger of contracting diseases from others, and that they should exclude from their cars all people affected with communicable diseases

While it is undoubted that the railroads have a right to exclude, and, for that matter, do exclude, from their cars people known to have contagious diseases, such, for example, as smallpox, it is entirely evident that the exercise of this right depends on correct diagnosis To refuse transportation to a person or persons because they were suspected by the ticket agent or conductor of having a communicable disease might entail serious consequences Railroads are common carriers required to perform certain public duties, prominent among which are the transportation of persons and property It is not possible to refuse transportation except under certain well defined conditions, and, since neither ticket agents nor conductors are, or can be from the nature of the case, physicians, it is difficult to see how, at least under present legislation, transportation is to be denied even to those who may be affected with communicable diseases The proper remedy if any remedy is possible, would seem to be in legislation making it a crime for those afflicted with certain communicable diseases to ask for or to accept transportation from common carriers"

TUBERCULOSIS

One of the most serious diseases travelers are exposed to is tuberculosis While we must look on this as a disease possible of direct transmission and while its prevalence and destructiveness are appalling public sentiment, and even the sentiment of the medical profession

7 Ricketts Infection and Immunity Chicago 1906 p 305

approves of granting it the right to travel The railroads can not refuse its victims transportation as dangerous passengers in opposition to the public sentiment which permits them the freedom of all other places, public and private. While I believe it would be well to restrict the freedom of the tuberculous, still, in recognition of the possible benefit that changes of climate may have on the disease, I am not now willing to advocate preventing them from taking advantage of such travel as they are able to undertake in search of health We are all undoubtedly more or less exposed to this widespread infection at some time in our lives, and the little more or less exposure involved in the healthseeker's travel is probably not of great consequence, the time of association being relatively short and not necessarily close. Much, however, may be done to limit the danger occasioned by the tuberculous whether in cars or elsewhere Their danger consists in spreading their sputa about them, projecting infected droplets into the faces of others or infecting the things they use, all of which may be avoided or at least so nearly avoided by correct personal habits that the danger practically disappears Teach the tuberculous that they are dangerous and instruct them in personal hygiene, for so long as they are permitted to associate in freedom with their healthy contemporaries they probably must also be allowed the privilege of traveling in the railway coach The sanitarium for the tuberculous is a safe place for the well It is made so by the patients themselves The railway coach deserves similar protection

This leads me naturally to speak of the often repeated proposal that special cars should be furnished for the diseased, more especially for the tuberculous The proposal undoubtedly has great virtue, and I would say that it should be acted on forthwith if there were not what seem to me insurmountable obstacles to carrying it into effect. In the first place, there is the economic consideration The amount of such travel will not justify furnishing special cars These people are often —indeed, usually—too poor to pay for the extra expense entailed Railways are economic institutions and can not be expected to furnish transportation at a loss The state is not yet sufficiently impressed with the desirability of isolation to be willing to pay the deficit But of even greater practical importance is the great probability that it would be impossible to get more than a small proportion of tuberculous patients into such special cars It is not necessarily the bedridden consumptive who affords the greater danger of infecting his associates Far more important is the patient, either unsuspecting or showing no conclusive signs of the disease to the casual observer, who would still insist on traveling as a healthy individual travels Of this class of patients there are vastly more going about the world than of those severely sick Only a law making it a misdemeanor for him not to declare his disease when applying for railway transportation would force him into his proper compartment, and even then, perhaps, a large proportion of them would either avoid or defy the law and take their places in the ordinary coach and sleeping car and escape detection In its last analysis the question would remain not so much one of the car as of the habits of those who use the car

By adopting a pessimistic view we may theorize the dangers of free social intercourse into formidable proportions The most constant optimism can not argue it into an entirely negligible quantity I have already expressed the opinion that direct contagion is responsible for most of the contagious diseases, but we must confess that it is a subject which it is difficult to materially alter in any other way than by education in personal hygiene which both the sick and the well should apply or by changing public sentiment on the subject of allowing those sick of certain diseases the freedom of intercourse and travel

THE CHANCES OF INDIRECT INFECTION

2 What are the possibilities of indirect transmission by reason of the use in common of a car's facilities for comfort and convenience? The answer to this question goes back, in great measure, to the determination of how many travelers are afflicted with transmissible diseases or harbor pathogenic organisms—a subject which has been touched on in the consideration of direct contagion Statistics are not at hand, and are scarcely possible of compilation, showing the proportion of the infected to the healthy among railway travelers Yet to determine with any degree of accuracy the possibilities of danger held out by them, either from direct or indirect contagion, it would be necessary to know the proportion of the whole each disease constitutes I do not mean to imply that knowing this would satisfactorily answer the inquiry It would rather furnish premises from which we might hope to reason logically on the liability of transmission It would still be necessary to establish, however, the degree to which various utensils must be contaminated before they could be said to hold out real danger of infecting the user The contraction of disease by infection is so largely a matter of individual resistance and susceptibility that it is difficult, indeed, to draw sharp lines on its probability The number of organisms which in one person produces disease may be innocuous to another We may compare pathogenic bacteria to poisonous drugs and speak of a harmless, toxic and lethal dose Theoretically I suppose it may happen that the smallest dose—a single organism—might be capable of producing a disease, but phagocytes, opsonins and other protective bodies of the human tissues are generally able to overcome considerable numbers of even the most virulent bacteria, and absolute sterility of the things we use, even freedom from pathogenic organisms, is not necessary in order for the great majority of us to escape infection

The railway should provide facilities in keeping with the state of sanitary science and the hygienic habits of the people, it can not, however, at all times enforce their proper use, and at any stage of perfection in the facilities provided abuses are liable to occur which must be laid at the door of the public The providing of sanitary appliances is the railroads' duty, the maintenance of sanitary conditions is largely dependent on the users Consider the wash basin It is much maligned, and, to a degree, justly so It is often left abominably dirty by the user, it is much used as a receptacle for washing the teeth, it is frequently used as a cuspidor With smooth basins and plenty of water this will entail no very great danger, perhaps—we regularly use contaminated water for bathing purposes and consider it safe —but it is, at least, a disgusting and a dirty habit It does not arise from the conditions existing in the railway coach, it is brought there by habits formed at home, and it should be corrected at home There is no place in the car devoted solely and especially to tooth washing, nor is there one in any other place, but there are smooth basins and plenty of water, there are cuspidors and there is a closet adjoining the lavatory These can easily be made use of to avoid both the danger and the disgust

until some new device is especially provided for tooth washing People generally neither try nor care to do so at this time. Before we are through with the crusade against spitting they must be taught that it is not sufficient to avoid spitting on the floor or the sidewalk, but that a wash basin is not to be used as a cuspidor and that drinking cups should be held sacred against tooth brushes

The dangers of indirect infection in railway coaches increase theoretically, and no doubt practically as well, in proportion to the length of time a car is in service on any single trip The longer the trip the longer the personal association of passengers, the greater their necessity of using toilet and other facilities at hand, and consequently the greater the liability of pollution. Other things being equal, the sleeping car would, therefore be more liable to contamination than the day coach Its average journey is longer Other things are not equal, however because of the constant supervision of the sleeping car en route, more care at its cleaning terminal its average higher class of patrons, and its carrying fewer persons to the car

It is largely in the power of railway passengers to annul on the one hand the dangers incident to their own intermingling and, on the other whatever measures the railroad may take for their protection. They have the right to demand, nevertheless, that the railroad provide facilities whereby they may carry out to the utmost their own protection. Closets should be well flushed perfectly emptying and capable of easy cleaning Lavatories should be supplied with abundance of water well drained, trapped to prevent back flow of water and entrance of dust, the surface should be smooth and easily cleansed by rinsing and wiping If each user would rinse and wipe out a wash basin after using it he would do no more than his hygienic duty and reduce to the vanishing point its liability of conveying infection. Small towels should be supplied in such abundance that each needs to be used but once. While the common hand towel is perhaps practically without danger one should never be obliged to use the common face towel on account of the danger of trachoma and other eye diseases

The common drinking cup has been much discussed and rigidly criticised of late and orders for abolishing its use entirely have been considered by the surgeon-general of the United States Public Health and Marine-Hospital Service It would be a sweeping reform, and the effect of such a move on the public humor can not be read in advance For the present the railroad is obliged to furnish something in the way of a drinking cup however and the attempt should be to provide one with the least liability of conveying infection from lip to lip It should have a perfectly smooth surface, outside and in preferably made of glass to better accomplish this result and to render immediately visible gross contamination and dirtiness It is through the medium of the common drinking cup that the closest indirect relations from a hygienic viewpoint are established between passengers and it is here, perhaps, that the greatest danger of the indirect transmission of disease arises There is considerable experimental evidence of cup contamination. A. Moeller[8] of Berlin has recently found tubercle bacilli influenza bacilli staphylococci and streptococci on the edges and in the residue remaining in communion cups Kinyoun[9] found pneumococcus streptococcus staphylococcus aureus and diphtheria bacillus once each in twenty-one drinking cups from sleeping cars Probably cups in constant or oft-repeated use are very generally infected, since mouths are always so and people generally are careless drinkers For the most part they contain harmless bacteria (Kinyoun found but one of the organisms isolated to be really pathogenic, the diphtheria bacillus while the pneumococcus was very slightly so), and the same number of organisms found in the wash basin would no doubt be entirely harmless, but the drinking glass comes a little too close for comfortable suspicion Its contents gain direct entrance to the body and traverse the whole gastrointestinal tract with its vast extent of absorbing surface where some point of entrance for organisms may be found Obviously the danger of transmission from this source is greatest in those diseases where there are lesions in the mouth as syphilis actinomycosis aphtha and tonsillitis and quite as obviously the simplest way to avoid it is for each person to carry his own drinking cup, as many do already The railroads can scarcely be held responsible for a danger to which they do not contribute more directly than they do to this and in which they follow a custom so generally followed and demanded by the public The common drinking cup is universal The evil it contains does not exist in its worst form in well-regulated cars where the cups are or should be, frequently cleaned There are ways of drinking from a cup which render the probability of contamination very slight Most people are careless in this as in other personal habits Rinsing and a clean towel will make almost any cup harmless however if the user cares to take so much trouble

The drinking water should be the purest locally obtainable, it should be cooled by ice from sources of a pure supply, which should be well washed before putting into the tanks and handled only from clean receptacles with tongs or clean gloved hands The water cooler should be removable and cleansable and protected from possible contamination by car occupants They should be frequently scoured and steamed These are clear-cut duties of the railroad or car company and distinctly apart from the hygienic duties of the traveling public

3 Hangings, linen and bedding are, in general appurtenances of sleeping cars only What part are they likely to play in the indirect transmission of disease? Linen may be at once dismissed from consideration since it is always fresh to the user So far as any single trip is concerned the hangings and beds belong in lots to single individuals and the consideration of their possible danger to the health of the traveler brings us to the discussion of the third element of the danger of infection in railway travel namely the possibility of the car itself being infected in such a way as to transmit disease to its occupants This is dealing simply with a new phase of the question of indirect transmission of disease—indirect transmission from previous passengers or from extraneous sources

Some investigation of this problem has been made in both this country and in Europe The investigations of Kinyoun above referred to included 1, The bacterial content of the dust from carpets, 2, the bacteria obtained from the interior furnishing of the coach, 3 the bacterial content of the air of the coach and 4 the bacteria of the drinking cup already referred to

It is worth while to review the results of these examinations Dust was obtained from 200 [illegible] of air passing over carpets being sw[illegible]

8 Deutsche med. Wochschr., 1905 xiv
9 The Bacterial Content of the Railway Coach, Med. News July 29 1905.

with compressed air. In seven samples so obtained many varieties of bacteria were found, principally those ordinarily found in the air. Microscopic search failed to demonstrate the tubercle bacillus among them, and animal inoculations proved its absence. The pneumococcus, staphylococcus aureus, streptococcus and colon bacillus were the only pathogens found, of these the author says, "Only the pneumococcus proved pathogenic, and this but slightly so." Some of the inoculated animals, I find from the subsequent text, however, developed abscesses from staphylococcus infections, a result to be expected, no matter what the source of the dust.

Dust was collected from the interior furnishings of twenty-nine sleeping cars, three day coaches and two smoking cars by rubbing sterile moist swabs over not less than fifteen square feet of surface. Eleven of these cars were running to health resorts during the height of the travel. Microscopic examination of these samples showed them to contain various bacteria and the ordinary elements of the dust of habitations. Of numerous samples stained for the tubercle bacillus two gave positive tinctorial and morphologic results. Sixty-four animal inoculations gave 1 positive tuberculosis, 5 pneumococcus infections, 1 diphtheria, 2 staphylococcus, 2 streptococcus, 2 colon bacillus, 1 malignant edema, 1 streptothrix, and 6 hemorrhagic septicemia. Forty-three animals gave negative results.

Realizing that the pathogenic bacteria floating in the air are of greater relative importance than those with stationary lodgment, special attention was given to their examination. Amounts of air ranging from 1,500 to 7,200 cubic feet were aspirated from forty-eight occupied coaches, twenty-seven running to and from health resorts, and its dust filtered out and subjected to analysis. The author says: "The majority of the bacteria found in the air evidently had their origin, as would naturally be expected, from the outside air." Ninety-six animal inoculations were made which resulted as follows: Tuberculosis 1, pneumococcus infection 8, staphylococcus infection 4, general septicemia 5, malignant edema 1, negative 76. The pneumococcal infections were obtained from the air of smoking cars almost entirely.

Prausnitz[10] and Petri[11] were able to demonstrate tubercle bacilli in cars carrying many consumptive patients to the health resorts of Switzerland and to Berlin during the first activity of Koch's tuberculin treatment. They were found chiefly on the floors as the result of spitting, an evil which our widespread crusades has materially lessened in the last few years.

Every space occupied by human beings is to a certain degree infected, as are all the individuals themselves. The colon bacillus, for instance, is a normal inhabitant of the human body. It appears in the intestines soon after birth and is not thereafter absent. Ordinarily it is harmless, perhaps even useful to the bodily functions, though under certain conditions it may take on virulent activities and give rise to pathologic processes. We expect to find it more or less generally distributed where human beings exist, otherwise the child would not become uniformly infected in the first few days of its life. Its existence in the railway coach is scarcely more than normal. "The pneumococcus is present in the nose, mouth and pharynx of a large percentage of individuals. It persists for weeks and months in the mouths of convalescents from pneumonia, and it reaches the mouths of those who are in the vicinity of pneumonics. It is found frequently in the conjunctiva and occasionally in the deeper air passages."[12] Knowing this organism to be fairly constant in the upper respiratory passages of normal individuals, we should expect to find it fairly constant in the places they inhabit. Having but little resistance outside the body it soon dies off, but occupied places are being constantly reinfected. Concerning the unusual conditions that must arise to precipitate infection of the pulmonary tissues we have little but theories. Certain it is that attempts should be made to lessen its distribution, this can be done only by care on the part of those who harbor it.

So far as the staphylococcus is concerned, it is widely distributed in nature. We all expect to find it on our hands, consequently on the things our hands pick up. Almost as much may be said of the streptococcus. It may be usually cultivated from the normal mouth cavity. Streptothrix is also frequently found in the normal mouth and usually is harmless there. The bacillus of malignant edema is normal in garden earth, which we handle with impunity. To introduce it into the peritoneal cavity is another matter. Hemorrhagic septicemia is produced by various organisms, which are more or less widely distributed in nature, and is not ordinarily an infection easily acquired.

Diphtheria bacilli may persist in the nose and pharynx of convalescents for weeks and months, continuing long after recovery. They are frequently found in the upper air passages of healthy persons who may never have had diphtheria, but who have been in contact with the diseased. Kober[13] obtained virulent bacilli from 8 per cent. of individuals who had been in direct contact with patients, and he states that 0.83 per cent. of the people at large carry with them virulent organisms. Ustvedt[14] found 4.5 per cent. of 4,277 school children to be infected, and he quotes Geirsvold, Graham-Smith, Leegard and others as reporting percentages of infection ranging from 2 per cent. to 30 per cent. of those examined. It is furthermore well known that many sore throats of benign type are really caused by the diphtheria bacillus. Wassermann[15] has shown that the blood of a large proportion of both children and adults contains diphtheria antitoxin, even when there is no history of the disease. These facts furnish ample explanation for the finding of the organism in cars and other places where people congregate and the practical impossibility of preventing such findings. The diphtheria bacillus is an obligate parasite, having no vegetative existence outside the body. Infection takes place chiefly by direct contact. It may occur also by indirect contact or, presumably, by the dust from infected fomites, since the organism may remain virulent for a considerable period in the dried state. With the vast number of infected throats among the general population the inference of indirect contagion is not only unnecessary to explain the cases that arise, but without clear and direct evidence of such a mode of infection is scarcely a logical supposition. Though I can not accept Chapin's[16] view that

10. Münch. med. Wochschr. 1892.
11. Arb. aus d. Kais. Gesundheitsamt, 1894, 111.
12. Ricketts, loc. cit., p. 339.
13. Die Verbreitung des Diphtheriebazillus auf der Mundschleimhaut gesunder Menschen. Ztschr. f. Hyg., xxxi, 433.
14. Die Diphtherieprophylaxe und die Bedeutung der gesunden Bazillenträger für die Verbreitung der Krankheit. Ztschr. f. Hyg., 1900, lv, 147.
15. Ueber die Persönliche Disposition und die Prophylaxe gegenüber Diphtherie. Ztschr. f. Hyg., 1895, 408.
16. The Fetich of Disinfection, THE JOURNAL, Aug. 25, 1906, xlvii, 574.

infection by fomites is among the great rarities and that disinfection is unnecessary still he has sounded a timely sentiment in urging the relative infrequence of the transmission of contagious diseases by inanimate objects, and has called attention to more fundamental, if not more important, means of control than fumigation He quite correctly looks on the infected individual as a far more dangerous source of transmission than the things this individual has used or the place he has occupied

In view of the fact that about 15 per cent of all people die of tuberculosis and that 80 per cent or 90 per cent of autopsies show evidence of healed tuberculous lesions, and that a large proportion of the afflicted associate with the healthy and distribute their infected sputum with indifference, it is a surprising element of Kinyoun's results that he succeeded in producing the disease in only two of 160 animals inoculated It is not surprising that car sweepings dust and furnishings are now and then infected with the tubercle bacillus Any public place is likely to be so Under present conditions we must expect it We all understand that the procedure necessary to most successfully combat the evil is to prevent spitting any place where the sun does not shine The remedy is personal cleanliness

The results obtained in the investigation of railway coach bacteriology up to this time are in the main what might have been expected It is not possible however, to draw conclusions from them which will finally establish the relations between the railway coach and disease without adding vastly to the experimental evidence which they contain It is desirable to know something of the average absolute number of pathogenic bacteria and their relation to the whole number present their ratio to the number of passengers and to the length of trips, the relation between the internal air and the surrounding air of the moving train and to compare these results with those obtained by investigating other inhabited places If the car contains only the organisms absolute and relative found in other similarly inhabited places, the problem then becomes one of altering conditions of infection generally, the car sinks into the relative insignificance of its small proportion of the whole and is merged in the general combat If on the other hand the car is found to be burdened with pathogenic bacteria in excess of other places, it then becomes a problem calling for special methods of solution and special care in its handling The time and labor required to determine these things is necessarily great on account of the many factors entering into the problem as it concerns the coach in transit

It is of course, hopeless to attempt to keep cars sterile or free from even pathogenic bacteria nor is this necessary in order that they may be safe In order to acquire an infectious disease we must receive organisms in sufficient quantity and of a sufficient degree of virulence We must also have a resistance low enough to permit infection to take place, and having that we may ourselves harbor the very germs that await the critical moment

Though we must expect most cars to contain pathogenic micro-organisms in greater or lesser numbers it is nevertheless desirable that the railroads should take precautions to reduce them to a minimum Good mechanical cleaning is of first importance Remove dust and dirt or excreta that may become dust and most of the bacteria grossly considered will be removed with it Beat or blow with an air blast the seats and carpets outside the car if possible It will not remove the last particle of dust but if it is well done not enough will be raised from them in ordinary use to afford danger of infection to the car occupants Scrub the floors wash basins and closets and disinfect them regularly Wipe down the woodwork Expose bedding to the disinfecting influences of air and sunlight and to beating and blowing If the sick have occupied coaches or sleeping cars fumigate them at the end of the run In addition, regular fumigation at stated intervals is indicated simply as a prophylactic measure There has been applied to the Pullman service within the past year a system embracing all these measures and one which in my judgment meets the more important requirements for the maintenance of sanitary cars Much labor is expended in removing dust much time is given to sunning and airing smoking rooms and closets basins and cuspidors are washed daily with disinfectants, cars that have carried the sick are fumigated, all cars are fumigated monthly and those running to health resorts weekly or oftener The public has a supplementary duty and the members of the medical profession a complementary one, educate the social body to an appreciation of its own power of self preservation

THE MORE INDIRECT DANGERS

Third —The miscellaneous influences constituting the third group of the dangers of railway travel as I have outlined them affect the health of car occupants only indirectly as a rule and tend to reduce resistance rather than to produce disease directly Certain individuals have peculiar susceptibilities of the nervous system rendering them liable to the so-called "car-sickness during any long railroad journey There are people too who almost invariably have attacks of migraine under similar conditions It is not possible to entirely prevent these results of rapid train motion in the predisposed though smooth roadbeds and comfortable cars probably tend to lessen the liability of their occurrence

The ventilation of cars is a vital problem That it has not been satisfactorily solved long ago is due to its great mechanical difficulties The car contains and must contain a minimum of space for a maximum number of occupants The swift and changing motion of the train its constantly changing direction and wind conditions its rapid transit from cold to warm or warm to cold regions the necessity of changing the air frequently the consequent great liability to draughts and the variable sentiments of the passengers who must all accept the same amount of air make up a combination of conditions difficult to manage The real difficulty arises of course when the outside temperature is low Summer ventilation is scarcely a problem We all know that cars often seem to be ill ventilated and "stuffy" but as a matter of fact we do not know just how good or how poor is the average of car air from the chemical standpoint A series of experiments is now under way to determine this The results of these experiments will be made the subject of a future communication

Remaining long in an atmosphere heavily laden with the products of respiration may produce headache drowsiness nausea and general malaise Similar results may come from a close overheated moist atmosphere even though its chemical purity is sufficient for every hygienic demand Indeed, recent experiments by

Flugge,[17] Heymann,[18] Paul,[19] Ercklentz[20] and others go to show that high temperature, much moisture and air stagnation are alone responsible for the deleterious influences of faulty ventilation, and that chemical impurity of the air plays no part in them except under the most extraordinary conditions A strong opponent of this view among recent writers is Wolpert,[21] who maintains that metabolism is hindered by a much breathed atmosphere Whatever the explanation, it seems to be certain however, that poor ventilation is ordinarily not harmless, and that in addition to the temporary symptoms of discomfort, the long occupancy of so-called "stuffy" rooms so lowers resistance as to be conducive to the contraction of colds and perhaps also to the more serious infections But draughts of cold air are equally depressing, and the problem is to find the means of introducing enough air to maintain comfort and not enough to produce danger from exposure

Heating is a problem going hand in hand with ventilation With the present means at our command it needs but care and intelligent operation to maintain a proper temperature in the closed car With the attempt to change the air frequently, however, the difficulty is many times increased, for the reason that the entering air is so liable to great variation in amount and temperature as indicated above If Flugge and his followers are right in their contention that the relation existing between temperature and moisture and the motion of the air are responsible for the whole of the bad effects of ill ventilation, then the problem of heating becomes relatively more important than it has heretofore been considered and ventilation relatively less important

A certain amount of dust and smoke and locomotive gases inevitably enter the train These are, of course, liable to great variation, but smoke and gases are not really troublesome except in passing tunnels, when they produce no more than temporary discomfort. Ordinarily only the heavier particles of smoke—the small cinders—enter the car, the lighter solid particles and the gases floating upward and away with the wind If we are forced to breath much smoke for prolonged periods it acts as a mechanical irritant and exerts a harmful influence upon the respiratory passages Ascher[22] of Konigsberg published a series of experiments on animals showing that it both hastens the fatality of tuberculosis and predisposes to acute infections of the lungs, and he arrives at similar conclusions concerning human beings from a study of the vital statistics in relation to smoke production in the manufacturing towns of Prussia

Ordinary dust is of more importance because it is more prevalent and because it may be infectious It comes chiefly from the railway tracks, and their nearly universal free exposure to the sunlight makes it very probable that any pathogens will be rendered innocuous before the dust stage of their container is reached Track contamination is probably of greater danger to the consumers of the water of streams into which sewage may be washed before it has a chance to dry than to the users of cars The mechanical irritation of dust is, however, of some importance. It may produce mild inflammation directly, or it may lower the resistance of the mucous membranes of the respiratory passages to the point of favoring infections Certain dusts, as those of the alkali deserts, which are soluble in the secretions, may act as chemical irritants Sprinkling of the track with oil, as is practiced by some railroads, is, therefore, a salutary measure from a hygienic standpoint. To convert dust into something else than dust removes the difficulty in the best way, and is in the end the simplest. Of next efficiency would be some air filtering device

It need scarcely be said, in conclusion, that it has been the author's purpose rather to define and to estimate the importance of the various problems of car sanitation than to detail their solution That there is always a slight danger of acquiring infectious diseases in railway coaches can not be denied That this danger is chiefly dependent on direct contagion in the close personal association of passengers seems probable, while indirect transmission through the common use of facilities for comfort or by the infected car is of secondary importance only

An attempt has been made to show why it is that personal hygiene is a most important element in the solution of the problems of car sanitation and why the cooperation of travelers is necessary to an effective combat against the contraction of infectious diseases in cars This statement must not be interpreted as a defense of the railway company which does not take every reasonable precaution to maintain its cars in a sanitary condition, or does not provide facilities whereby the liability of the transmission of infectious diseases may be reduced to a minimum The duties of the railway in this regard are perfectly clear, and their fulfillment is essential to the maintenance of the public health Bad habits in matters of personal hygiene are due largely to ignorance It is the correction of this very general ignorance in the public at large that must supplement the best car sanitation in order to bring it to a high degree of efficiency in protecting those who travel

17 Ueber Luftverunreingung Wärmestauung and Lüftung in geschlossenen Räumen., Ztschr f Hyg xlix, 363
18 Ibid 388
19 Die Wirkungen der Luft bewohnter Räumen Ibid 405
20 Ibid 433
21 Ztschr f Hyg I 529 and II 175
22 Der Einfluss des Rauches auf die Atmungsorgane Stuttgart, 1905

CHRONIC ARTICULAR RHEUMATISM AND ARTHRITIS DEFORMANS *

PROF A HOFFA.
ASSISTED BY DR G A WOLLENBERG
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I wish to present some researches on the subject of chronic articular rheumatism and arthritis deformans which I have been making for a number of years, with the cooperation of my assistant, Dr Wollenberg By some authors, especially surgeons, chronic articular rheumatism is distinctly separated from arthritis deformans, while another group, chiefly internists, refuse to accept this distinction

Take a concrete case, a woman of 35, affected with a chronic joint disease The disease first involved symmetrically the joints of the fingers and toes Slowly and without fever, the affection spread in paroxysmal attacks from the finger joints to the wrists, elbows, ankles and knees At length the patient became entirely helpless, she was confined to an invalid chair or to her bed permanently The disease was chronic from the beginning, no valvular affection arose and the patient did not react to salicylic acid

What position does this affection assume in pathology?

* Abbreviation of an address delivered February, 1907, before the Anglo-American Medical Association of Berlin.

It has been variously designated chronic articular rheumatism, arthritis nodosa, polyarthritis chronica villosa, rheumatoid arthritis, etc

I wish to give you the proof from clinical, radiologic and pathologic-anatomic sources, that it is an affection *sui generis,* to be sharply separated from arthritis deformans Let me designate this disease as polyarthritis chronica progressiva primitiva, or, in order to distinguish it from arthritis deformans, simply as arthritis destruens, because the destruction of the joint ends is characteristic of the disease The term rheumatism is dropped, since there is a chronic articular rheumatism occurring as a sequela of acute articular rheumatism, but presenting in its acute or subacute onset a different clinical picture from the disease under consideration Furthermore, I drop the term deformans, as we have not to deal with an alteration of the joint characterized by atrophy of the bone and cartilage on the one hand, and proliferation of cartilage and bone on the other, but with an actual destruction of the joint itself We shall see that oc-

If the joints be inflated with oxygen the soft parts of the joints are made visible, and in such an oxygen Roentgen ray picture the changes already described are seen, and in addition it is shown that the upper recessus of the joint is well preserved There is never such a breaking down of the joint as is characteristic of polyarthritis chronica progressiva, in which an obliteration of the joint cavity is the rule

In the clinical course of polyarthritis chronica progressiva the marked characteristics are the progressive character, its beginning in the small joints and spreading to the larger ones, deformities of various types, and especially the high grade of muscular atrophy. Roentgenographs show extremely characteristic changes

Above all, an extraordinarily high degree of atrophy of the bone strikes us In addition, the breaking down of the cartilage is significant The outlines of the joints disappear, the extremities of the bones are pressed one on another, and, where the latter are lying on one another, defects and enlargements are found The enlarge

the function of the limbs plays a rôle If you observe how the patients use their hands, you will see that they try to pick up a thing from the table by grasping it with their pronated hands, consequently, the fingers must be deviated to the ulnar side In the same way the hyperextension in the interphalangeal points is easily explained by the patients bracing their fingers, in the use of their hands, with the tips on the table, etc

The consideration of the Roentgen ray plates has shown us that in arthritis deformans and in chronic progressive polyarthritis we have to do with two entirely different diseases

Entering now into the consideration of the pathologic-anatomic differences of the two affections, our researches in this direction have resulted in the following

1 *Arthritis Deformans* (in the sense of v Volkmann) —The pathologic process manifests itself first in the cartilage and in the bone, while the synovialis in the beginning only shows insignificant alterations If the appearance of dentation and of proliferation at the cartilage are already well marked, we see at the synovialis only a simple hyperplasia of villi with a slight new formation of vessels and connective tissue Only when the cartilaginous and bony parts of the joint are strongly altered, when extensive destructions, polished surfaces and glandular proliferations of the margin are present, do the above-described alterations at the synovialis become more distinctly marked

The inflammatory signs on the synovial membrane, however, are but slight, only rarely few small accumulations of lymphocytes occur, but never nearly as much as in the earlier stages of the primary chronic polyarthritis On the contrary, in the later stages of arthritis deformans degenerative processes of the synovialis, especially hyaline degeneration, become more prominent Thus the entire synovialis may be changed into a structureless hyaline tissue Furthermore, calcification and pigment deposits (intracellularly and extracellularly) are often found

If we compare these alterations with other pathologic processes of the synovialis, they resemble mostly the anatomic pictures of traumatic synovial affections, which we have had frequent opportunity to observe, and we are therefore inclined to refer a great part of the anatomic alterations of the synovia in arthritis deformans to an "internal trauma," to which the synovial membrane is exposed in every movement

2 *Primary Chronic Progressive Polyarthritis* —The pathologic process begins here in the strictest contradistinction to arthritis deformans in the synovialis, whereas the cartilage at first shows no alteration In the earlier stages of the disease we observe a far more marked proliferation of villi of the synovialis, a far more copious new formation of vessels, a far greater proliferation of the fixed connective tissue cells, than we meet with even in the more advanced stages of arthritis deformans, most significant, however, are large accumulations of round cells lying close to one another, representing mostly circumscribed, perivascular, lymphoma-shaped formations, in addition, we find here and there a diffuse infiltration of the tissue with lymphocytes

These lymphoma-shaped, round-cell accumulations are also found in various other diseases of the joints, but there they are almost never so numerous and dense, of course, they are not specific, and are especially sharply distinct from tuberculous nodules Alterations of the cartilage and of the bone are in these early stages either not present, or they have a purely regressive character, as the cartilage undergoes destruction, shows erosions, or is substituted by a pannus-shaped granulation tissue, originating from the synovia Thus the cartilaginous surface is gradually transformed into connective tissue

In later stages, also apparently slight symptoms of proliferation may occur, especially in mild cases Under the influence of the granulation tissue covering the cartilage, a slight swelling of the interstitial substance of the cartilage may arise A real proliferation of cartilaginous cells, however, we could only find in a slight degree At the margin of the cartilage the corticalis is perforated and granulation tissue, likewise originating from the synovialis, infiltrates the marrow cavity

In very late stages of the affection we finally find a strong connective tissue thickening and a shrinking of the joint capsule, furthermore, a more or less complete fusion of the portions of synovialis opposite to one another and of the articular extremities Everywhere in the neighborhood of the surfaces of fusion we find more or less copious accumulations of lymphocytes and infiltrations The cartilage is now entirely or almost entirely broken down or substituted by connective tissue so that often only a thin lamina of connective tissue forms the outline of the marrow cavity, since the corticalis of the bone is also extensively destroyed The bony ends of the joint are markedly diminished in size their spongiosa being extremely rarified and altered into scanty, very thin trabeculæ Proliferations of the bones and of the cartilage we have not been able to ascertain

If we compare these anatomic alterations with those of other joint diseases, a great resemblance of the lesions of the synovialis with those in infectious arthritis of a known etiology, as, for instance, in gonorrheal arthritis, is manifest

In arthritis deformans we have to deal with a primary affection of the skeleton parts of the joint, in polyarthritis progressiva, on the contrary, with a primary affection of the soft parts of the joint According to our statements, we must, therefore, insist on definitely separating these two forms of disease

My classification of chronic joint diseases on an etiologic basis would therefore be as follows

A Non infectious chronic joint diseases
  1 Traumatic arthritis chronica
  2 Irritative arthritis chronica (Hydrarthos chronicus)
  3 Constitutional or dyscratic arthritis chronica
    (a) Gout (b) hemophilia.
  4. Arthritis deformans
    (a) Spontaneous (b) reactive (c) neuropathic.
  5 Functional arthritis chronica (joint neuralgia intermittent hydrops)
B Infectious chronic joint-diseases
  1 Primary infectious chronic joint-diseases
    (a) Polyarthritis chronica progressiva primitiva or destruens.
  2 Secondary infectious chronic joint diseases
    (a) Secondary chronic joint rheumatism following an acute joint rheumatism (b) Chronic joint diseases after acute infectious diseases gonorrhea scarlatina measles etc (c) tuberculosis (d) syphilis

This is only an attempt to classify chronic joint diseases etiologically, for in a number of cases of the diseases concerned the etiology is still hypothetical As long as we have nothing better, we must be content to inaugurate the progress, and progress can only be made by recognizing the etiology of our affections In this direction, therefore, our further researches have to be carried out

Concerning the prognosis of our disease, I do not wish to enter into details But I would like to add some remarks on therapeutics You all know that in these chronic diseases, besides salicylic acid and other drugs, the whole arsenal of physical therapy has been tried, hot air, massage, gymnastics, various poultices and packings, baths, etc, however, as a rule, with no great success In arthritis deformans I have often obtained good

results with supporting apparatus for the hip as well as for the knee and for the foot, after all other means had failed This is well known In very much advanced cases, where even supporting apparatus did not help, I finally decided to perform the resection of the articular extremities of the hip and of the knee, and have here obtained good results

The treatment of polyarthritis destruens is more difficult All the measures of physical therapy have been tried unsuccessfully I have repeatedly performed arthrectomy, especially of the knee, but with no good results beyond slight improvement in the symptoms On the other hand, I obtained good results, that is to say, I enabled patients to walk even when contractures were far advanced, by supporting apparatus applied after stretching the contractures and fixing the legs in the stretched position The leather must extend over the knee joints in such a way as to give them a real support Then the patients receive side supports and by means of these and of special stretching apparatus one can gradually stretch the legs entirely straight The supports of the knee are made movable only when the disease has improved so far that the swelling of the joints has considerably decreased and the pains have entirely disappeared I advise, however, not to do this too early, as otherwise relapses may readily occur I have found that it is best to assist the apparatus treatment by a course of mud baths When the legs are stretched, the atrophied muscles are strengthened by daily massage, and finally the patients can put away their machines entirely after some years without fearing any relapse

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THE DEVELOPMENT OF CARDIAC MURMURS DURING ATTACKS OF BILIARY COLIC *

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In two cases I have had the opportunity of observing, a systolic murmur, not previously present, was heard during or soon after an attack of biliary colic The first case was in a woman, a doctor's mother, sixty-one years of age, who had had her first attack of gallstone colic eighteen years before I saw her in a typical seizure, the third within a few days, as a sequel to which she passed five faceted stones At the first examination I discovered a loud, systolic murmur at the apex, which the doctor assured me had not been present before There was no accentuation of the second pulmonic sound The murmur persisted for nine days, the jaundice, which was pronounced, lasted only four days After an interval of two years, during which the patient was very well, she had another attack of biliary colic with jaundice, but without murmur, and without the passage of stones An operation, the advisability of which had been considered was rejected Two months later another attack occurred and in this one the patient died The jaundice was decided in all the attacks, the murmur was present in only one, and in only one was there any itching, and then of slight degree

The second case I saw was with Dr E Landauer Oct 29, 1906 The patient was a man 52 years of age a tobacco stripper, whom I had seen some weeks previously on account of a persistent pain in the right hypochondrium, at that time his heart was normal, except for accentuation of the second aortic sound October 20 he had a violent attack of biliary colic, followed by deep jaundice and three separate seizures of chills and fever without sweating, there was no itching On examination I found in the mitral area a loud, blowing murmur which Dr Landauer tells me he first noticed October 24 The cardiac boundary was enlarged to the left and ran outside the left nipple line, the liver extended a hand's breadth below the costal arch, but was not tender, the urine was deeply bile-stained the feces clay-colored A diagnosis of stone in the common duct was made I did not see the patient again but I am informed by Dr Landauer that at the operation on November 1 a large, solitary, ovoid stone was found in the common duct The jaundice which had been very pronounced, rapidly disappeared the murmur is still present although the heart outline is practically normal [1]

In the literature there are but few references to murmurs in connection with gallstone disease or with jaundice Gangolphe[2] calls attention to the subject and reports nine cases, of which four were examples of cholelithiasis, two were cases of emotional jaundice so-called, two of cancer of the liver, and one of cholangitis I will give brief summaries of these cases

CASE 1—Male, aged 21, two weeks before admission to the hospital, nearly lost his life in aiding an injured man Since that time there had been malaise followed by jaundice, with tenderness in the hepatic region There was palpitation of the heart, strong impulse no enlargement of the boundary A systolic murmur could be heard at the mitral and tricuspid areas Four days later a systolic murmur developed in the aortic area transmitted into the cervical arteries, a month later the murmurs had all disappeared, and the patient left the hospital

CASE 2—Female aged 31, had always been well except for repeated attacks of hepatic colic, followed by jaundice The last attack occurred ten days previously There was no fever, but there were slight jaundice, tenderness and a small tumor in the gall bladder region There was a systolic murmur at the apex, the latter being normal in position, no appreciable change could be made out in the volume of the heart, the murmur lasted twenty two days

CASE 3—Female aged 57, had cancer of the liver There was slight jaundice A systolic, apical murmur appeared eighteen days after entrance into hospital

CASE 4—Male, aged 30, had hepatic colic, subfebrile temperature and bradycardia A systolic murmur at the base was audible in the vessels of the neck; a systolic murmur at the apex appeared coincident with the onset of the bradycardia

CASE 5—Female aged 51 had emotional jaundice following fright, a systolic murmur was present at apex Eleven days after admission to hospital the murmur was very faint and eventually disappeared entirely

CASE 6—Female aged 26 had hepatic colic A systolic murmur was present heard best in the third interspace to the right of the sternum and was transmitted into the vessels of neck A systolic murmur of the same quality was heard at the apex but was not transmitted to the axilla There was no fever pulse was 68 Six days later the murmur and icterus grew fainter and the patient felt well and demanded her discharge

CASE 7—Male aged 54, had cancer of the liver with inflammation of neighboring structures There was fever at first intermittent then remittent A systolic murmur was heard at the apex with doubling of the first sound

CASE 8—Male aged 34 had hepatic colic He was admitted

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* Read before the Section in Medicine of the College of Physicians of Philadelphia Dec. 10 1906

1 On December 19 fifty-one days after my visit I saw the patient again He seemed to be entirely well the murmur had disappeared

2 Du bruit de souffle mitral dans l'ictere Thèse de Paris 187

August 20, with jaundice and generalized itching A systolic apical murmur appeared seven days later, the pulse then was 40 By September 7 the murmur had disappeared

CASE 9—Male, age not given, had catarrhal jaundice He entered the hospital July 12 with no murmurs and temperature 39 1 C (102 3 F), pulse 112 On July 19 there was no fever, pulse was 70, a systolic murmur was present July 22 pulse was 56 and the systolic murmur was loud On July 25 the murmur was still audible, the jaundice had lessened By July 30 the murmur had disappeared

Fabre,[3] among eight cases of jaundice, found the heart affected in five, but gives only meager details regarding them In an elaborate monograph Rendu[4] mentions a case of hepatic colic in which a systolic murmur appeared A woman, aged 57, had repeated attacks of colic, in the last one dilatation of the heart with the production of a systolic murmur supervened, and ended in death In another case of hepatic colic with jaundice there was marked arrhythmia, and in one of catarrhal icterus, a gallop rhythm without arrhythmia Rendu also cites a case of Potain's, in which all the signs of tricuspid insufficiency were found without the classical causes for that condition The patient had had repeated attacks of hepatic colic, and it was during one of particular violence that the signs of cardiac disturbance manifested themselves Treatment directed to the cholelithiasis caused disappearance of all symptoms, including the tricuspid murmur Potain[5] and Rendu both believed that the murmur had its origin in the right heart and was due to a transitory dilatation of the right ventricle

Tessier[6] classifies the cardiac disturbances depending on gastrohepatic disease as follows 1 Unusual loudness of the second sound 2 Doubling of the second sound 3 Tricuspid murmur 4 Complete tricuspid insufficiency with venous pulse This indicates that he, too, thinks the murmur is produced at the tricuspid valve

Guéneau de Mussy,[7] for whom Revillout claims priority in the discovery of cardiac murmurs in jaundice, attribute the murmur to a paralyzing effect of the bile salts on the vasomotors and the general circulatory system Gangolphe considers the principal factor to be a paralysis of the papillary muscles, while Fabre looks on myocarditis produced by the accumulation of biliary salts and acids in the blood as the essential change Quincke,[8] who observed the murmur as well as accentuation of the second pulmonic sound, believes it to be no more frequent in icterus than in other conditions in which the general health is impaired

There are various ways in which a murmur may be produced in cholelithiasis and jaundice

1 By a true endocarditis, such as may readily be caused by any septic process in the hepatic region, as empyema of the gall bladder or suppurative cholangitis

2 By anemia

3 By altered chemism of the blood apart from anemia

4 By dilatation of the heart and other changes in the myocardium, as e g, paralysis of the papillary muscles

The transitory character of the murmur, together with the absence of any signs indicating grave infective lesions in the region of the liver, renders it unlikely that the murmur is due to an acute endocarditis Anemia can hardly be a factor of importance, the murmur comes on too early, long before any signs of grave impairment of health manifest themselves It can scarcely be that the jaundice is responsible for the murmur in cases like those I have described, otherwise such murmurs would be more common I have purposely examined a considerable number of jaundice cases, but have not detected a murmur in any save the two mentioned Among them were cases of deep jaundice that had persisted for several months with decided detriment to the general health, and yet there was no murmur Moreover, the murmur usually outlasts the jaundice If the jaundice has nothing to do with it, do the bile acids and bile salts play any rôle? I do not think they do in the sense that they alter the chemism of the blood as anemia does, but they may cause changes in the myocardium or in the innervation of the heart, it being agreed that they are responsible for the slowing of the pulse

One point of importance remains, namely, the *pain*, and this I hold to be the principal factor in the production of the murmur in cases of hepatic colic The pain, which is proverbially of the most agonizing character, in the predisposed, causes dilatation of the heart with a temporary insufficiency of the mitral valve, perhaps, also, of the tricuspid I said "in the predisposed," because if pain were the only etiologic agent, then every case of biliary colic ought to have a murmur The heart must be potentially dilatable

This theory, or hypothesis, fails to account for the murmur in Gangolphe's cases of emotional jaundice, and for that sometimes seen in catarrhal jaundice and in cancer of the liver With regard to the last, I think that anemia and cachexia are an adequate explanation What the factors are in the rather dubious emotional jaundice I am not able to say, personally I have not met with any such cases, nor have I heard the murmur in question in cases of catarrhal jaundice

A word as to the practical importance of the murmur If its mode of production is as I have stated, then its presence indicates that the musculature of the heart is not entirely normal, and, therefore, it enforces some caution in the choice of the anesthetic, perhaps in that of the operative technic itself A prolonged operation might be dangerous On the other hand, the discovery of the murmur might lead to the erroneous belief that an old endocarditis existed, a belief that would probably influence the decision of the physician or surgeon It is evident from these considerations that the knowledge that a systolic murmur might arise *de novo* in cases of biliary colic and that it is an index of a weakened myocardium—a weakness that may not be serious—will be of value in the management of a given case

3 Gaz. des Hôp 1877 p 916

4 De l Influence des maladies du coeur sur les maladies du foie et reciproquement, Paris, 1883

5 Gaz. des Hôp 1878 p 667

6 Progrès med 1879, p 725

7 Quoted by Revillout Gaz des hop 1878 666

8 Dis of Liver Nothnagel s Practice English Translation p 438

TORSION OF THE GREAT OMENTUM

WITH REPORT OF A CASE *

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The full value of the following case has suffered by my neglect to report it when the literature on the subject was scant. It is with the hope that even this delayed report may be of value that it is now given, with some remarks on the subject based on the literature which I have been able to secure

Patient—Mrs J K Austrian, aged 34, iii para

* Read before the Los Angeles County Medical Society Feb 15 1907

History—I first saw her in 1893 during an attack of acute abdominal pain and discovered an ovarian tumor about the size of an adult head These attacks of abdominal pain were repeated at frequent intervals In January, 1894, she had two attacks of this pain and in February three She gradually lost strength and flesh and the tumor slowly enlarged February 23 an unusually severe attack of the pain drove her to consent to operation

Operation—March 2, 1894, the abdomen was opened by a median incision six inches long, below the umbilicus The tumor, which was intensely congested and rather firmly adherent to the parietal peritoneum and intestines, was removed with some difficulty The pedicle was about two inches long by three inches wide, and was twisted on its long axis, from left to right The tumor was a multilocular ovarian cyst with thick walls of a dark bluish color, and contained about one gallon of dark bluish, almost black fluid, as the result of the strangulation at the pedicle It was noticed that the uterus was enlarged to the size of a large orange and was soft The parietal and intestinal peritoneum was lusterless, velvety and bluish red and the abdomen contained a small quantity of fluid The incision was closed by through and through sutures of silk and a glass drainage tube was left in for forty eight hours Recovery was uneventful and she left the hospital on the eighteenth day

Postoperative History—In April it was noticed that the uterus was enlarged, and in May it was nearly to the umbilicus August 15 she gave birth, unattended, to a large male child About one year after the birth of the child a hernia developed in the laparotomy wound, and in June, 1901, an abdominal binder and pad was applied The hernia was then about the size of a small orange, easily reducible and caused little inconvenience July 14, 1901, she found it impossible to reduce the hernia, and there was some pain, but no vomiting On the following day the pain increased and there was no passage from the bowels July 16 I saw her and found a fat woman, with pendulous abdomen, who appeared very sick She had vomited that morning, and the pain in the abdomen was severe Her pulse was 140 The hernia was about midway between the umbilicus and pubes, about the size of an orange, it was hard and tender to the touch There was slight redness over a small area and increased local temperature No attempt was made at reduction She was removed to the hospital and operated on at once

Second Operation—The hernial sac was thickened and of a dull reddish color The contents of the sac consisted wholly of omentum, matted into a solid mass, bluish black in color and adherent everywhere by recent adhesions to the sac and the hernial ring There was no pedicle and apparently no constriction at the ring, which was about two inches in diameter On loosening the adhesions at the ring it was found that the hernial mass was directly continuous with a mass of similar appearance within the abdomen This intra abdominal mass was delivered with some difficulty through the hernial ring but without enlarging it It was not adherent within the abdomen except at the hernial ring, and came out like a cork from a bottle, revealing a pedicle no larger than a goose quill, about two inches long and twisted several times on its long axis The omentum proximal to the pedicle was of normal appearance but the distal mass was intensely engorged and matted into a solid mass

The pedicle was ligated and the mass removed The abdomen contained considerable bloody fluid but there was no peritonitis Radical closure of the hernia followed and recovery was uneventful The mass removed was in size and appearance not unlike an average placenta No notes were taken of the number nor direction of the twists in the pedicle

HISTORICAL

The first mention of torsion of the omentum in the literature is the report of a case by Oberst[1] Ten years passed before the second case was reported that of Demons[2] A silence of five years was followed by the report of Baver,[3] of Monod[4] and Eiselsberg[5] In 1899 Eitel of Minnesota[6] reported a case which has been included in some of the collections and excluded from others

In 1900 the reports became more frequent, and Wiener's[7] valuable paper appeared attracting attention to the subject in this country, by reporting a case and reviewing five cases from the literature In 1902 Moresco[8] collected ten cases and reported one of his own The following year Vignard and Girondeau[9] reported two cases of their own and collected twenty cases and in the same year Rudolf[10] reported four cases from Schmitzler's clinic and collected twenty-five additional Audier[11] in 1904 published a valuable thesis on the subject, with abstracts of twenty cases and a report of one In 1905 Corner and Pinches,[12] in a valuable paper on the subject were able to collect fifty-four cases from the literature up to the end of 1904, including three new ones of their own and one of Makin's and a brief record of each of these cases was published in the St Thomas' Hospital report for 1904

In a very cursory review of the literature for 1905 and 1906 I have found reports of seven additional cases The number of reported cases is now so large that a careful study of them will permit certain general conclusions to be drawn and although Corner and Pinches have covered the subject with thoroughness in their articles I hope that I may be able to add a little of value

DEFINITION

The term torsion of the omentum should include only those cases in which twisting of the omentum on itself has caused a sufficient obstruction of the circulation to produce evidences of strangulation The matting of the omentum into a mass or ball which precedes the torsion, although a part of the pathologic process, should not by itself be included under this term Strangulation from any other cause than the twisting of the omentum on itself should also be excluded

CLASSIFICATION

A sufficient number of well-described cases have been reported to permit a division into well-defined clinical and pathologic groups A strictly clinical division into acute and chronic is warranted from the varying intensity of the symptoms which attract attention to the condition, although the pathologic changes which precede the appearance of the symptoms of strangulation are probably always chronic

Among the chronic cases should be included those in which the torsion of the omentum has occurred gradually or has not reached such a degree as to cause great obstruction to the circulation The venous return only is obstructed as is evidenced by venous engorgement and edema, but with the production of no acute symptoms of strangulation

The number of chronic cases yet reported is small and they are of secondary interest as compared with the larger class of acute cases which are characterized by sudden onset and symptoms of acute strangulation

1 Centrbl f Chir 1882 xxvii
2 Rev de Chir 1893
3 Centrbl f Chir 1898 xvii
4 Thès de Regnier 1898
5 Deutsch med Woch chr 1898
6 N Y Med Rec May 1899
7 Ann of Surg 1900
8 Gazz. degli ospedali e delle clin 1902 lxix
9 Arch provincial de Chir 1903
10 Wien klin Rund chau 1903
11 Thès de Lyon 1904
12. American Jour Med Sci.

ANATOMICO-PATHOLOGIC CLASSIFICATION

A study of the reported cases suggests a convenient classification from an anatomico-pathologic standpoint into two main groups, according as the point of torsion is within the sac of a hernia, or within the abdominal cavity As some reported cases combine the two conditions, we may make a third class and divide all the cases into three groups

1 Torsio Omentalis Intrahernialis
2 Torsio Omentalis Intra abdominalis
3 Torsio Omentalis Intrahernialis et Intra abdominalis

In the first group are included those cases in which the point of torsion lies, at least in part, within the sac of a hernia, and the whole mass of strangulated omentum lies outside of the general abdominal cavity and within the hernial sac (Fig 1) The cases of this group are distinguished from strangulated epiplocele only by the absence of constriction at the hernial ring and by the presence of a twisted pedicle The number of reported cases which may be included in this class is not large, but it is probably of fairly frequent occurrence, and has been mistaken for strangulated epiplocele This same remark will apply with equal force to volvulus of the intestine, and Corner and Pinches have drawn attention to the frequency with which volvulus in strangulated intestinal hernia is found if sought for

The second group, or intra-abdominal torsion, is char-

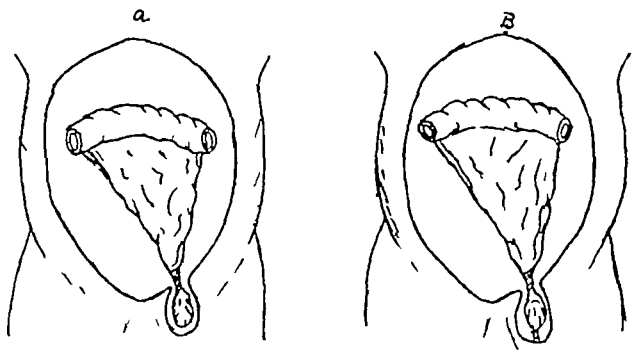

Fig 1 —Torsio omentalis intra hernialis a, about one point, b about two points

acterized by the presence of a point of torsion lying altogether within the abdominal cavity (Fig 2) The strangulated omental mass may then be found altogether within the abdominal cavity (Fig 2, c) or partly within the abdomen and partly within the sac of a hernia (Fig 2, d), but not constricted at the hernial ring Those cases in which no hernia was evident, or if present had no direct connection with the omental mass, are the purest examples of this group, but neither the existence or non-existence of a hernia, nor the presence or absence of part of the omental mass in the hernial sac are the distinguishing features of this class, according to my definition It is not the situation of the omental mass, but the location of the point of torsion which determines the class. This class contains by far the largest number of the reported cases, as attention is attracted to the uncommon condition of strangulated omentum, within the abdominal cavity and the mechanism of the third class being more complicated, its actual frequency must be less

The third class comprises those cases in which there exist two points of torsion, one lying within the cavity of the abdomen and one at least partially within the sac of a hernia (Fig 3) There will thus be formed one (Fig 3, g) or two (Fig 3, h) strangulated masses of omentum according to the location of the distal point of torsion

These three classes of torsion are based on the conditions as found at operation or autopsy in the published cases, but these conditions do not necessarily indicate the position of the omentum at the time of torsion, as classes one or three may be converted into class two by reduction of the omentum from the hernial sac into the abdomen, and the possibility of extrusion of an intra-abdominal mass into a hernial sac, after strangulation has occurred, is admissible

As a subdivision of these main classes the classification of Vignard and Girondeau[9] is useful as an indication of the mechanism of the torsion They divide the cases into three groups according to the number and nature of the point of torsion

Class A —Torsion about one point alone
Class B —Torsion about two separate points
Class C —Complex torsion

In Class A, torsion about one point alone are placed those cases in which the omentum has described one or

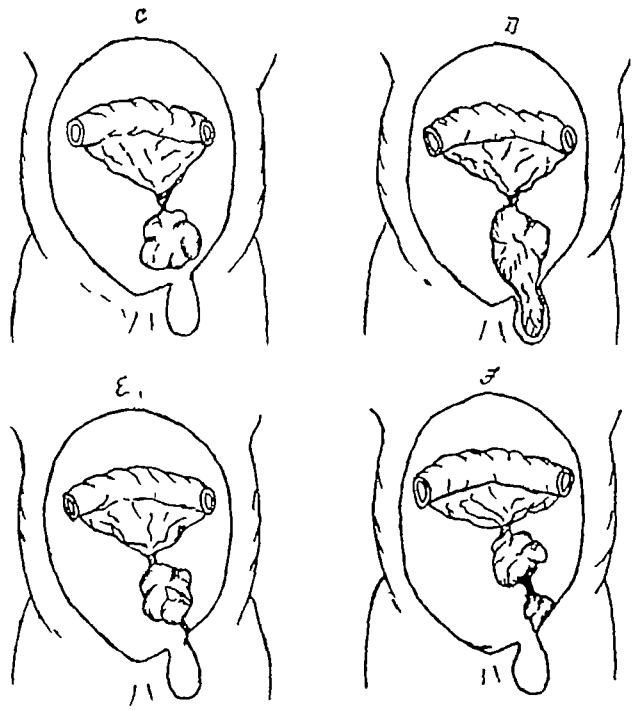

Fig 2 —Torsio omentalis intra abdominalis c and d about one point e and f about two points

more revolutions on a vertical axis about one fixed point There is thus found but one pedicle which may be intra-abdominal (Fig 2, c and d) or intrahernial (Fig 1, a), and but one strangulated mass The majority of reported cases belong to this class

In the cases of Class B the revolutions have taken place about two fixed points, and two pedicles are found both of which may lie in the abdomen (Fig 2, e and f), or both within a hernia (Fig 1, b), or, as has been frequently the case, one may be intra-abdominal and one at least partly within the sac of a hernia (Fig 3, g and h)

In these cases one or two strangulated masses are formed according to the mechanism of the torsion

If the distal extremity of the omentum is attached by a small area to some fixed point the omentum is divided into but two parts, a proximal normal part and a distal strangulated mass, the latter being attached by

one pedicle to the normal omentum and by a second pedicle to some fixed point within the abdomen (Fig 2 e), or in the sac of a hernia (Fig 3, h) But if the area of adhesions to the distal fixed point is large the omentum is divided into three portions, a proximal normal portion, a central strangulated mass connected by one pedicle to the normal omentum and by a distal pedicle to a second likewise strangulated mass, which may be intra-abdominal (Fig 2, f) or intra-hernial (Fig 3, g) Several cases of this class are recorded

Cases of the third class or complex torsion are more complicated in their mechanism, as the strangulation is produced by knotting or twisting of separated shreds of omentum about each other (Fig 4, k), or of one shred about the main omental mass (Fig 4, i) But few cases of this class are recorded They may be either abdominal or hernial in type

ETIOLOGY AND MECHANISM

The normal great omentum hangs down like an apron in front of the intestines and is attached by a broad base to the transverse colon and stomach, the distal extremity hanging free within the abdominal cavity subject to movements imparted to it from the intestines and other abdominal organs and to influences from without, with probably also an independent movement of its own

Should the free extremity of the omentum become thickened or matted into a mass or ball we would have conditions favorable to a torsion, analogous to those of a triangular piece of cloth attached by its base to a fixed point with a weight hanging from its apex (Fig 2, c) If the free extremity should become adherent to any fixed point, as so frequently occurs, we would have a condition analogous to a triangular cloth attached by its base and apex, each to a fixed point around which the intervening portion could rotate on its long axis (Fig 2, e) In this case there would be formed two pedicles and either one or two strangulated portions according as the attachment of the apex was over a large or small area (Fig 2, e and f, Fig 3, g and h)

The conditions necessary for the production of an omental torsion are, therefore, the formation of a mass of matted omentum at its free extremity or the formation of a second fixed point by adhesions of the free end to some other structure

That a hernia is the most frequent factor in the production of these conditions is evidenced by the frequency with which its presence is mentioned in the reported cases In but six of the fifty-four cases collected by Corner and Pinches[12] was the presence of a hernia denied Even in these cases doubt is thrown on the actual absence of a hernia by a recent observation of Riedel[13] In a young woman on whom he operated, with a diagnosis of acute appendicitis, an acute torsion of the omentum was discovered There was no hernia demonstrable externally, but on carefully pulling up the omental mass the neck of a femoral hernia came into view Further traction disengaged the tip of the omentum and it appeared in the form of a plump mass twisted once on its axis In this case had the reduction of the hernia been accomplished before opening the abdomen or unconsciously during the operation, as could easily happen this case would have been reported as "no hernia" Riedel is inclined to believe, therefore, that this condition is frequently present in "no hernia" cases

Inguinal hernia has been the variety most frequently present, but femoral, umbilical and ventral hernias are represented among the reported cases I have been able to find mention of but one other case than my own of hernia in a laparotomy scar, that of Souligoux and Deschamps[14] The great majority of the hernias are incient, as one would expect, for matting and adhesions to occur Although hernia is the cause of the vast majority of cases, the same conditions may undoubtedly be produced by other processes The matting or balling of the free extremity may be produced by tumors or by inflammatory thickening

Adhesion of the free end of the omentum may take place to any organ within the abdomen and torsion results In Noble's case[15] it was adherent to the fimbriated extremity of the fallopian tube, in Peck's case[16] to the right ovary, in Wiener's case[17] to an appendix epiploica of the ascending colon and to the abdominal wall, and in Simon's second case[18] it was adherent to an ovarian tumor The complex torsion may be produced by hernia or by inflammatory changes, causing separation of the omentum into shreds, which become twisted or knotted

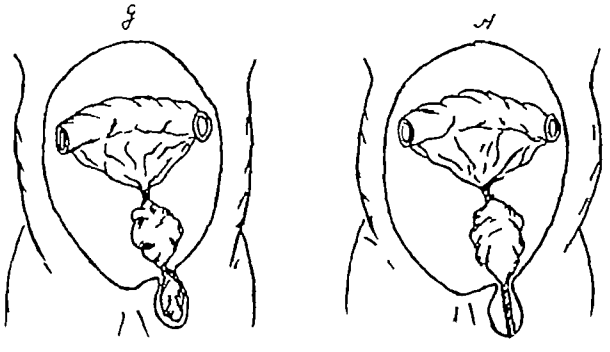

Fig 3 —Torsio omentalis intra hernialis et intra abdominalis

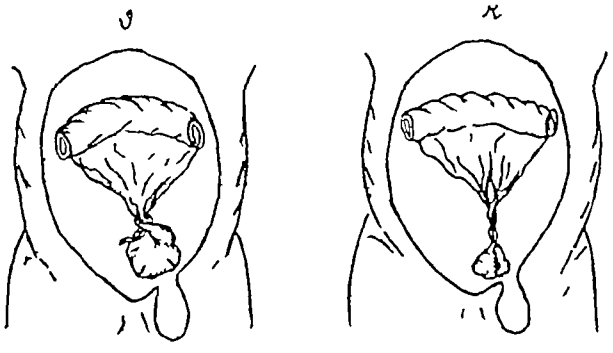

Fig 4 —Torsio omentalis complexa

SYMPTOMATOLOGY AND DIAGNOSIS

That the formation of a matted mass or ball of omentum is a necessary antecedent to the strangulation by torsion seems probable for it is otherwise difficult to account for the mechanism It is however, not until sufficient torsion has occurred to obstruct the return circulation that symptoms of strangulation appear The presence of the omental mass may have been unnoticed, or its presence may have been known for some time as a solid tumor within the abdomen or within the sac of a hernia, without symptoms of strangulation having appeared If the torsion takes place slowly, or if it is of

13 Centrbl f Chir 1906 xli
14 Bull. Soc Anat Paris 1901
15 American Jour of Obst 1901 p 261
16 Med Rec 1900
17 Ann of Surg November 1900
18 Münch Med Wochschr 1907 xlii

a degree sufficient only to cause slight obstruction to the return circulation, the symptoms will be of a mild character If the torsion is intra-abdominal there may be only vague discomfort with or without ascites

If the omental mass lies in part or as a whole within a hernial sac the symptoms will be those of a mildly strangulated hernia In the vast majority of cases the onset has been sudden and the symptoms have been those of acute strangulation, differing in no wise from those of acute strangulation of the omentum in an epiplocele If a part or the whole of the strangulated mass lies within the hernial sac the signs also are those of strangulated epiplocele The presence of a strangulated mass within the abdomen also adds little if any to the symptom complex, and it is only the discovery of a tumor within the abdominal cavity which distinguishes the intra-abdominal and the combined hernial and abdominal from the purely hernial cases In Rudolf's case[10] only has a correct diagnosis been made before the operation The most frequent diagnoses have been that of intestinal strangulation, appendicitis and peritonitis

The only cases which admit of a probable diagnosis are those in which the presence of an old omental hernia, reducible with more or less difficulty, has called attention to the probability of a matting or balling of the omentum If, then, symptoms of strangulation should appear a suspicion might be aroused of the real nature of the affection If, in addition, the intrahernial mass is found to be directly continuous with a mass within the abdomen and more especially if the intrahernial mass is reducible without relief of the symptoms, a diagnosis of reasonable probability could be made

When torsion of the omentum becomes more widely known as a possible cause of symptoms of strangulation and is considered as a possibility in every case in which the symptoms and signs point to intestinal or omental strangulation, a correct diagnosis before operation will be more frequently made

PROGNOSIS

As the diagnosis has been made in but one case before operation, it is impossible to make any definite statement sustained by facts as to the mortality of this affection if left to itself The degree of strangulation, the area of the strangulated mass, and its location, will determine the issue That unaided recovery is possible, even in acute cases, would seem probable from what we know of strangulated epiplocele Repeated attacks are recorded from which recovery has taken place, the nature of the attacks being unrecognized until a more severe one has led to operation, and the discovery of the probable cause of all previous symptoms If the degree of strangulation is sufficient to cause gangrene of the omentum the probable result would be, and has been in several cases, peritonitis and death

The results of treatment have been most satisfactory As would be expected the cases of early operation have, without exception recovered As in all cases of strangulation of abdominal organs, the mortality depends on the stage of operative intervention

TREATMENT

There can be but one treatment of this affection early operation and removal of all omentum which shows signs of strangulation Fortunately the necessity of early operation is apparent in most of the affections for which torsion of the omentum has been mistaken In one case, that of Eitel,[6] the twisted omentum was unrolled and allowed to remain, but this plan, even if desirable, could be followed only in such an exceptional case as his

EXAMPLES

I have selected from the collected reports, as far as possible, a type of each of the classes described, and a perusal of the abstracts may prove of interest

CLASS 1—*Torsio Omentalis Intra Hernialis* (Oberst[1]) Male, aged 35 A right inguinal hernia which had existed for twelve years became irreducible two days before the operation A diagnosis was made of irreducible hernia At operation the sac was found to contain an omental mass, connected by a pedicle leading through the inguinal rings to the normal omentum within the abdomen (Fig 1, a)

CLASS 2—(a) *Torsio Omentalis Intra Abdominalis Chronica* As an example of the chronic form of this class, Eitel's case,[6] I think, may be cited, although Corner and Pinches[12] exclude the case, claiming that torsion was not proved

Male, aged 44, with great abdominal ascites Three gallons of fluid withdrawn by tapping Twenty four days later a second tapping withdrew two and one half gallons, and a tumor, which was soft, movable and painless, was discovered in the abdomen At operation three days later a tumor was exposed consisting of omentum, "rolled inward and upward, producing constriction and obstruction to the return circulation, as evidenced by enormously dilated veins" The tumor was unravelled without difficulty, and the omentum spread out over the intestines The enlarged veins disappeared and the omentum resumed a normal appearance The other abdominal organs were normal

That in this case the obstruction to circulation was due to torsion seems probable, and Eitel's neglect to use the word, I think, should not exclude his case That the ascites was due to the constricted omental circulation certainly seems probable, as it did not return after unrolling the omentum

(b) *Torsio Omentalis Intra Abdominalis Acuta*—Acute intra abdominal torsion of the omentum about one point only (Fig 2, c) is well illustrated by the case of Simon[11]

TYPE 1—Male, aged 26 There was no hernia nor disposition to such, to which adhesions of the omentum could have occurred The symptoms were such that a diagnosis of acute appendicitis was made. On opening the abdomen, one and one half liters of bloody fluid were found The omentum was converted into a bluish black tumor, measuring 18 cm in length It had but one pedicle, which was attached to the middle of the transverse colon Resection was followed by recovery

My own case is an example of this class, but of that variety in which a part of the strangulated mass is contained within a hernia sac (Fig 2, d)

The variety of acute intra-abdominal torsion in which twisting occurs about two separate points (Fig 2 e) is well illustrated by the case of Bayer[3]

TYPE 2—A woman, aged 54, had a left inguinal hernia for fifteen years Following an attack of coughing there was some pain in the hernia with the sensation of a body revolving within the sac On the following day an operation was undertaken for strangulated hernia There was found a mass of strangulated omentum within the abdomen, attached by a proximal twisted pedicle to the transverse colon, and by a distal twisted pedicle to the abdominal wall near the mouth of the sac, both pedicles being within the abdomen A portion of the strangulated mass had been extruded into the hernial sac

The case of Peck[16] should probably also be included in this class, as the strangulated omental mass which lay wholly within the abdomen, was connected proximally to the transverse colon by a tightly-twisted pedicle and was adherent distally by old adhesions to the right ovary Simply the presence of adhesions between the omental mass and neighboring organs is not suf-

10 Wien klin Rundschau 1903

ficient to warrant the statement that torsion occurred about two points, but the presence of old adhesions makes it seem probable

CLASS 3—*Torsio Omentalis Intra Abdominalis et Intra Herniales* As the presence of two pedicles, one in the abdomen and one within a hernial sac, is the distinguishing feature of this class, they are all examples of torsion about two separate points, but two types may be distinguished according as the distal pedicle lies between an intra abdominal omental mass and a second intrahernial mass (Fig 3, g), or stretches from a single intra abdominal mass, through the neck of a hernia to a fixed point within the sac (Fig 3, h) As an example of the first type the case of Audier[11] is typical

Type 1—A woman, aged 50, was operated on *in extremis* for a strangulated hernia A mass of gangrenous omentum was found in the hernial sac On enlarging the wound upward, this mass was found connected by a pedicle to a large mass, also strangulated, within the abdomen This large mass was in turn connected by a second pedicle to the transverse colon The gangrenous omentum was resected, but the patient died in collapse

The second type in which but one strangulated mass is found (Fig 3, h) is well illustrated by Nordmann's second case[20]

Type 2—A man with a right congenital inguinal hernia previously reducible developed symptoms of strangulation In the abdomen bloody serum was found and the omentum was adherent and thickened The omental mass was twisted close to the transverse colon above, and a second pedicle, also twisted, led through the neck of the hernia to the testicle where it was adherent Resection was followed by recovery

Complex Torsion—The examples of this variety are few, but the case of Heitz and Bender[21] will illustrate one form of complex torsion (Fig 4, k)

A left inguinal hernia which had been irreducible for some time, revealed on operation that the lower extremity of the omentum had become separated into two parts, which had become twisted at their bases about each other, so tightly as to cause obstruction to the circulation

When a description of the condition known as torsion of the omentum is included in the text-books on surgery and its mechanism and symptomatology become more widely known I believe it will prove to be a much more frequent affection than the reports indicate

Although the number of reported cases is now above sixty, the publishing of future cases will be of value In order to aid in the classification of cases future reports should be exact in their description of the conditions present. The location of the point or points of torsion should be explicitly stated and the location of the strangulated mass or masses The presence of old adhesions of the omentum and their bearing on the mechanism should be noted The presence or absence of a hernia should always be stated, and if no hernia is apparent, careful search of the abdomen should be made at the operation for hidden hernial sacs

If the possibility of torsion of the omentum be borne in mind in every case in which the symptoms point to strangulation of some abdominal organ, a correct diagnosis before operation will become more frequent than has hitherto been the case

20 Deutsche Med Wochschr 1903 xxviii
21 Bull Soc Anat October 1900

Anesthetize Patients on Operating Table—Dr J T Gwathmey, New York, states that patients should be anesthetized on the operating table, thus avoiding the lifting and jolting otherwise necessary He declares that there is no reason why every operating table should not be fitted with wheels thus making it possible to anesthetize the patient in an adjoining room

Clinical Notes

ACUTE PURULENT MYOSITIS *

A. O SQUIER, M D
SPRINGFIELD, MASS

Patient—Dr L P, aged 39, consulted me at my office about 6 p m, May 13, 1905

History—The patient stated the day previously he had changed the dressings of a child on whom a tracheotomy had been done for relief of tracheal obstruction due to the pressure of a purulent collection in the adjacent tissues While doing this his patient coughed and ejected a quantity of the trachael contents, particles of which he was conscious were projected into his face, nose and throat. No immediate ill effects were observed, but about noon of the following day he began to have chilly sensations, headache and some pharyngeal soreness The chilliness increased steadily during the afternoon, until at the time I saw him he was having a severe rigor with chattering of the teeth and general muscular quivering Temperature, 102 F, pulse, 106, respirations, 24 He complained of severe headache, anorexia and tendency to nausea He was at once ordered to bed During the succeeding twelve hours he had a short, dry, hacking cough and intense frontal and occipital headache and severe backache His tongue was heavily coated and he complained of discomfort in right chest He was nauseated several times during the night, very restless until 1 30 a m, then dozed occasionally He had a slight epistaxis at 2 a m and chilly sensations during the night On the morning of May 14 he felt much improved and was inclined to consider his illness not serious He requested to see the daily papers and proposed getting dressed and about later in the day Temperature, 99 2 F, pulse, 72, respirations, 20 This improved condition continued until after 3 p m, at which time the records were as stated He had slept at intervals during the day About 5 p m he began to have chilly sensations and complained of intense muscular pain in left arm and left chest, and of severe diffuse headache and backache At 7 45 p m his temperature was 103 1, pulse, 112, and respirations, 26 At 10 30 p m, temperature was 104 F, pulse, 126, and respirations, 26 He slept none during that night, skin was hot and dry, had frequent nausea, and his fingers and toes were cyanotic at intervals He was bathed frequently and liquid nourishment was given him His urine for twenty four hours was 19 ounces and contained a large quantity of albumin and many granular and hyalin casts

From 6 p m, May 14, until after noon May 17 his temperature ranged from 103 2 F to 104 4 F continuously There was no regular diurnal variation, it sometimes being high in forenoon, again in afternoon or at midday or midnight Hot sponge baths induced free perspiration for short periods On May 15 he had five free liquid dejections following the use of elaterium The pulse range during this time was from 106 to 120, and his respiratory rate 20 to 26 During the night of May 16 he coughed frequently, was delirious at times and had rather profuse epistaxis at 10 p m Slept one and one half hours during the night

On May 17 he complained of severe pain in region of left pectoral muscle, had persistent, dry, hacking cough, but no expectoration, suffered from intense postocular and occipital headache Light annoyed him He had a moderate epistaxis three times during the forenoon Was delirious at frequent intervals during the day and perspired freely in the evening

On May 18 at 9 a m consultation was held with Drs J H Musser, Weiser, Keefe, Guild and Weston Patient's temperature was 103 2 F pulse, 104 and respirations 28 He had slept but about twenty minutes during the night A most thorough examination of the chest was made, but no abnormal pulmonary or cardiac condition was demonstrable The left pectoral muscle was somewhat indurated and exquisitely tender on palpation Needle exploration for pus was negative The subsequent progress of the case demonstrated the insufficiency of this method for determining the presence of pus

* Read at regular meeting of Hampden Medical Society Oct 17 1905

Diagnosis—Acute myositis, infective, with acute nephritis, probably also infective The infective agent probably the pneumococcus, grippe bacillus or staphylococcus In the endeavor to determine the infective agent careful bacteriologic examination was made by Dr Guild of both the nasal and buccal discharges, but without demonstrating the pneumococcus The patient was delirious the greater part of the day

May 19 Patient slept about eight and one half hours (induced) Complained of aching in all parts of body, with particular soreness of left chest on coughing or deep inspiration Temperature, 102 6 F at noon, 100 2 F at 6 p m, pulse ranged from 104 to 98

May 20 Soreness in left chest, stiffness and pain in cervical region Temperature (high), 102 6 F at 3 a m, (low), 101 2 F at 3 p m, pulse, 110 to 96, respirations, 44 at 9 p m, 26 at noon

May 21, 22 and 23 Temperature ranged from 102 F to 99 6 F, pulse from 104 to 88, and respirations from 44 to 26 Slept most of the time Had to be awakened for nourishment and medicines Complained of general pains throughout body, and of an annoying, short, dry, hacking cough most of the time when awake, and of severe headache

May 24 Headache continued and he complained of vertigo of subjective type, and of frequent attacks of faintness and malaise His skin was cool, moist and clammy Temperature, 102 F to 99 F, pulse from 110 to 90, and respirations from 32 to 26 During this time there was exquisite tenderness, marked redness and a tense, indurated condition in the left pectoral region Sometimes deep palpation would indicate that there might be fluid deeply seated, again this would not be demonstrable, but the muscles felt hard and tensely drawn against the chest wall Pain was constant in the left pectoral muscles and left arm There was no voluntary movement of the arm because of increased pain if such movement was attempted The forearm was flexed on the arm most of the time, this position affording the greatest degree of comfort The arm could be moved only about two inches laterally without causing extreme pain

May 25 to June 3 inclusive Patient perspired freely and continuously, and the pain in his left arm was very severe and continuous He felt extremely weak and exhausted Had several large, loose dejections with sharp, griping pain in bowels every day He attributed this to the milk (which had been peptonized), and for three days milk was discontinued and other forms of nourishment substituted—barley, egg albumin, chicken broth and meat powder The dejections were apparently well digested only two containing undigested particles Headache was constant He perspired freely during the night Slept on an average eight hours every night, and from five to eight hours during the day Had severe pain in left arm and occasional chilly sensations There was a distressing tendency to cough His face was very red at intervals, being cyanotic about the nose and ears Had more pain in arm during the last two days and less in chest wall

On June 2 about 4 p m he complained of feeling cold and of having increased pain The pain in the pectoral region was described as of a deep boring, burning character Soreness of throat with constant headache and increased hebetude Temperature ranged from 102 6 F to 98 6 F, during most of this time being from 100 F to 101 F Pulse was of good volume and from 114 to 92, the greater part of the time being between 100 and 110 Respirations were from 30 to 24 For several days there had been an increasing difference of opinion between the attending physicians as to the demand for surgical intervention, and on June 3 it was determined to summon Dr J B Deaver in consultation He saw the patient at 8 a m June 4 It was then decided that the patient should be removed from his hotel, where he had been from the beginning of his illness to the hospital This was done

Operation—At 9 a m June 4, operation was done by Dr Deaver An incision was made from near the left coracoid process diagonally downward across the chest, following approximately the lower border of the pectoralis major muscle to a point near the lower end of the sternum About eight ounces of thick purulent material was evacuated The muscle was considerably disorganized but as remarked by Dr Deaver at the time, apparently not sufficiently to preclude possible restoration to comparative usefulness Numerous pus foci were present scattered through the body of the pectoral muscles These were evacuated, the large pectoral muscle being lifted from the chest wall and all the exposed parts thoroughly cleansed Four counter openings were made through the skin along the line of the clavicle at the upper border of the cavity, through which large rubber drainage tubes were passed, emerging through the long incision below The wound was then packed with gauze and the patient returned to bed Previous to the operation the temperature was 99 8 F, the pulse 106, and the respiration 24

Postoperative History—Patient recovered consciousness at 10 20 a m The skin was cold and covered with a profuse clammy perspiration At noon his temperature was 97 6 F, pulse 114, and respirations 20 He slept at intervals during the day Complained of chilly sensations about 5 p m There was considerable serous oozing from the wound At 9 p m his temperature was 103 8 F, pulse 140, and respirations 38 He perspired freely all night Felt weak, but had no pain in arm or chest, and slept eight hours

June 5 to 9 inclusive At 6 a m of June 5 his temperature was 100 4 F, pulse 140, and respirations 34 At 6 p m temperature 102 F, pulse 138, and respirations 28 During the following days the diseased area was thoroughly irrigated twice daily with antiseptic solutions and packed with plain gauze Temperature ranged from normal in the morning to 101 6 F at night Pulse from June 6, two days after operation, to June 10, from 98 to 110 Respirations, 24 to 30 To the date of the surgical intervention, mental depression had been a marked feature Following the surgical measures the mental attitude changed decidedly and the patient was bright and cheerful.

June 10 Complained of more pain in left shoulder and chest, and also of great exhaustion Had occasional chills Temperature ranged from normal to 102 F, pulse weaker, 116 to 128, respirations, 24 to 28

June 11 Pain through left chest, shoulder and arm increased Increased discharge of pus and perspired profusely, especially when asleep

June 12 Temperature from normal to 101 2, pulse, 120 to 138, respirations, 24 to 28 This condition continued with little if any change until June 17, the patient feeling very weak and exhausted and having severe pain in left arm, shoulder and chest Temperature, from 100 F to 103 F (latter at 6 p m both 16th and 17th), pulse, 126 to 148, respirations, 26 to 30

Second Operation—June 18—At 9 a m temperature was 99 6, pulse 126, and respirations 26 At 6 p m, temperature 102 6 F, pulse 124, and respirations 28 At 8 p m, operation by Dr Deaver, consisting of complete extirpation of the left major and minor pectoral muscles with clearing of the axillary space which was filled with disorganized, broken down tissue The pectoral muscles consisted of softened, infiltrated débris, with numerous pockets of pus The denuded surface was swabbed with pure carbolic acid, followed immediately with alcohol, and the wound was then packed with gauze saturated with alcohol The patient was returned to bed at 8 55 p m in a state of collapse with no perceptible radial pulse, surface of body cold and bathed in perspiration At 9 30 p m pulse was 200, at 10 p m, 210, at 11, 180, at 12, 200, at 1 a m, 220 Died at 1 30 a m without having recovered consciousness The improvement in the pulse shortly after 10 a m followed the intravenous introduction of 24 ounces of physiologic salt solution

Uranalyses—The first quantitative analysis of the urine was made May 16 and contained 17 per cent (by volume) of albumin, numerous other coarse, dark, granular, medium sized casts, some hyaline casts and a few epithelial cells Urea 10 grains to the ounce

May 19 Albumin, 4 5 per cent (by volume)

May 26 Albumin, 1 75 per cent (by volume) During this period the chlorids fluctuated between 1 and 2 per cent Urea normal or slightly below

May 30 There remained but a trace of albumin, chlorids

7 per cent, and urea 6½ grains per ounce There were found three medium sized hyaline casts

June 7 Albumin entirely gone, urea 6 grains to ounce, chlorids 9 per cent The twenty four hour quantity fluctuated between 50 and 100 ounces, averaging 70 to 80 ounces

Bacteriologic Examinations—May 15 Widal test for typhoid, negative On June 1 a blood examination showed the leucocyte count 20,650 per mm, increase confined to the polynuclear leucocytes It was an inflammatory leucocytosis, probably septic, not enough to warrant a diagnosis of pus formation On June 5 a bacteriologic examination of specimens of pus taken from swabs of diseased surfaces at time of operation on previous day showed only the staphylococcus pyogenes aureus

Dietetic Treatment—It was realized from the outset that the patient was suffering from a complication of diseases of a most serious nature The attempt was made, therefore to secure the assimilation of a sufficient variety and quantity of food to fully support the vital forces To do this without overworking the renal organs added to the difficulties The patient was supplied with, and perfectly assimilated from 2,000 to 4,000 calories of mixed foodstuffs during each twenty four hours of his sickness During the entire period he had but two dejections containing undigested particles in sufficient quantity to be determinable by macroscopic examination He was so well nourished as to occasion approving comment of the professional friends who saw him

Medicinal Treatment—The first day he had, in divided doses two grains of calomel, which acted mildly On the second day he had one grain of elaterium, divided in eight doses This was followed by free watery dejections with immediate relief from uremic symptoms On the fourth day he had one dose (by rectum) of 20 grains of chloral hydrate and 60 grains sodium bromid, which was followed by several hours of refreshing sleep At this time and continuing for several days he had 20 grains of potassium citrate every four hours, alternating with one drop doses of a 1 per cent solution of glonoin From June 3 to June 10 he had no drugs From this date until the end he had strychnin sulphate, 1/40 to 1/30 grain hypodermatically at three and four hour intervals

The surgical conditions and treatment have been given in detail in the history of the case

THE BLOCKING OF AURICULAR EXTRASYSTOLES

ALBION WALTER HEWLETT, M D
SAN FRANCISCO

The newer methods of analyzing the venous pulse have enabled us to differentiate clinically a number of forms of cardiac arrhythmia that could not otherwise be properly classified So far as I am aware, arrhythmias due to a blocking of extrasystoles on their passage from the auricles to the ventricles have not been described I am able to report such a case here through the kindness of Dr T W Huntington

Patient—P C clergyman aged 56, entered the Lane Hospital for operation on a left inguinal hernia

History—His family history was excellent and his past history contained little of note He had been twice poisoned by eating mussels, the last time five years ago, but had never had a severe illness He habitually drank a cup of coffee in the morning, a cup of tea at noon and an occasional glass of wine at meals he did not use tobacco He first noticed some irregularity of the heart three months previously He did not know what brought it on nor what made it worse and was conscious of his heart action only when considerably excited He had no shortness of breath on exertion no swelling of the feet, no attacks of dizziness, no cough, etc

Examination—This showed a rather nervous, fairly well nourished man The right pupil was slightly larger than the left, both reacted to light and on accommodation Lungs abdomen, and reflexes were negative

Heart and Vessels The point of maximum impulse was in the fifth intercostal space, 2 cm outside of the mammary line and 12 cm to the left of the median line The area of cardiac dulness extended from the upper border of the third rib to 12 cm to the left and 3 cm to the right of the median line The heart sounds were clear, the first being of a booming quality at the apex, the second at the pulmonary area was accentuated and reduplicated The radial arteries were markedly thickened and contained irregular hard plates The temporal arteries were also thickened and tortuous Pulse The rhythm was interrupted at times by small premature beats, followed by longer compensatory pauses, at other times there was simply a pause in the regular succession of beats without any palpable premature pulse These pauses were sometimes so frequent as to produce for a short time a slow and perfectly regular rhythm (Fig 2) One might have suspected that he was dealing with an ordinary case of extrasystoles, some of which produced a radial pulse, while others did not Auscultation over the apex however, showed complete silence during most of the intervals when no extra pulse was felt, whereas, as is well known, extrasystoles affecting the ventricles invariably give rise to a well marked first sound

Sphygmography—In Figure 1 are seen tracings of the radial pulse, the apex beat, and the jugular pulse during a comparatively normal period The duration of the normal pulse interval is about 0 85 second The jugular tracing shows the three characteristic waves *a*, due to the contraction of the auricle, *c*, the transmitted carotid pulse, and *v*, following the contraction of the ventricle The regular

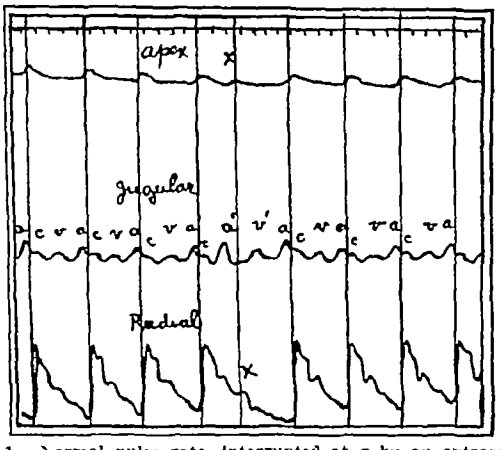

Fig 1—Normal pulse rate interrupted at *x* by an extrasystole which starts in the auricles and spreads to the ventricles

rhythm is interrupted by an extrasystole at *x* This extrasystole shows slightly on the rather poor apex tracing, and slightly also on the radial tracing On the jugular tracing it is indicated by an unusually high wave *a*, which begins a little earlier than the *v* wave, which should follow the preceding normal systole. The early occurrence of this wave and its height lead us to believe that it is due, at least in part, to a premature auricular contraction, and possibly in part to the *v* wave from the preceding normal systole The carotid pulse following this extra auricular contraction is so small as not to be visible on the tracing from the neck, but the radial tracing shows that a small extra pulse was present The apex tracing and the occurrence of a *v* wave on the jugular tracing likewise bear witness to the occurrence of an extrasystole of the ventricle This tracing shows, therefore, a normal pulse rhythm interrupted at one point by an extrasystole The latter originates in the auricles and spreads thence to the ventricles

The radial pulse in Figure 2 might lead one to suspect a slow and regular heart action were it not that the apex tracing and a closer inspection of the radial tracing also demonstrate the presence of extrasystoles, *x* It is possible to have ventricular extrasystoles interpolated between the normal beats of a slowly beating heart without there being any compensatory pauses[1] On such an assumption the normal pulse interval in this tracing would be 1 5 seconds, but from Figure 1, which is a continuation of Figure 2, on the same piece of paper, we have

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already learned that the normal interval is 0 85 second From a comparison with this earlier tracing, it also becomes apparent that those extrasystoles of Figure 2 involving the ventricles are exactly the same as the solitary extrasystole of Figure 1 They all originate in the auricles and spread thence to the ventricles In two places on Figure 2, however, no extra ventricular contractions are interposed between the normal beats This appears not only from an inspection of the apex tracing, but from the complete absence of heart sounds previously referred to A study of the jugular pulse shows the cause of this absence The ordinary extrasystole in this patient shows itself on the jugular pulse by a well marked *a'* wave, due to the premature contraction of the auricle, and also by the *c* and *v'* waves, due to the contraction of the ventricles During these intermissions, however, the high *a'* wave alone appears The auricles contract prematurely, but no contraction of the ventricles follows

The reason why the ventricle fails to contract may be studied in Figure 3, which by a fortunate coincidence shows on a rapidly moving paper the three main features of this pulse, viz The normal pulse, the extrasystole crossing to the ventricle, and the extrasystole that affects the auricles only The interval between any *a* wave (contraction of the auricle) and the succeeding *c* wave (carotid pulse), the *a c* interval, as it is called, has been taken by Mackenzie to measure the rate of transmission of the cardiac contraction wave from the auricles to the ventricles Its normal duration is 0 2 second or less, and if it

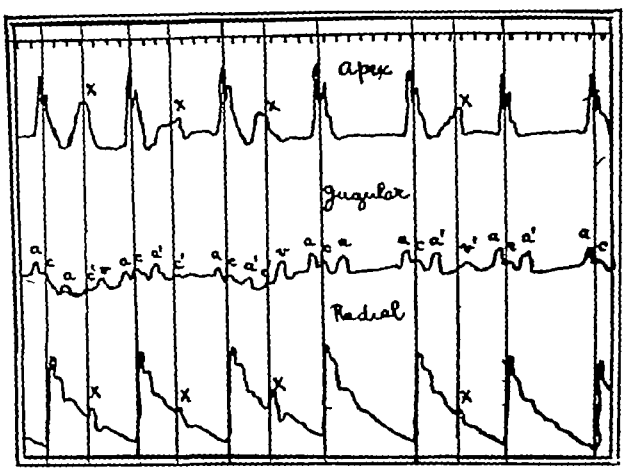

Fig 2—Each normal pulse is followed by an auricular extrasystole In those marked *x* the extrasystole spreads from the auricles to the ventricles In the remaining two the contraction wave does not affect the ventricles.

be longer than this, Mackenzie considers that the conductivity across the His bundle is impaired The *a c* interval for the normal beats in my patient was 0 18 second, or about normal The *a c* interval for the extrasystoles on the other hand was 0 35 second, a very considerable prolongation (0 17 second beyond his normal), yet the prolongation here was due only in part to a loss of conductivity A comparison of the apex and jugular tracings shows that the interval between the beginning of the *a* wave on the jugular tracing and the beginning of the ventricular contraction on the apex tracing is 0 13 second in the normal beat and 0 21 second in the extrasystole, a lengthening of 0 08 second The remainder of the lengthening of the *a c* interval is due to the fact that an abnormally long time elapses between the beginning of the ventricular contraction and the beginning of the carotid pulse (prolongation of the period of ventricular tension) Thus in Figure 3, the interval between the beginning of the ventricular systole and the beginning of the normal carotid pulse is 0 05 second, while the same interval for the extrasystole is 0 14 second, a difference of 0 09 second At least two factors tend to lengthen the period of tension both of which depend on the early occurrence of the abnormal contraction In the first place, the aortic pressure is highest just after any systole so that the earlier the succeeding contraction the longer it will take for the intraventricular pressure to reach such a height as to exceed the aortic pressure and to open the semilunar valves In the second place, the contractility of the ventricle is reduced after a systole and it seems reasonable to assume that a weakened ventricle should take a longer time than a rested one to produce a certain pressure

How are we to explain the complete absence of certain ventricular contractions? Two possibilities present themselves 1, A lack of conductivity from the auricles to the ventricles, 2, a lack of contractility on the part of the ventricles We have just seen that where the ventricles take part in the extrasystoles both conductivity and contractility are diminished The diminution of conductivity is apparent from the lengthening of the interval between the contraction of the auricles and the contraction of the ventricles The diminution of contractility is evidenced by the prolongation of the period of tension A still further reduction of either of these might lead to a falling out of the ventricular systole, but it is difficult to decide which is actually most at fault in this patient One fact mitigates against its being a lack of contractility In the many times I listened to the irregular heart action I have never heard an extrasystolic first sound that was not followed by a second sound, which means that the ventricular contractions when present, were always of sufficient force to send blood into the aorta or pulmonary artery Had the falling out of the extrasystoles been due to a lack of contractility we should have expected to find transition systoles of such force that, although the ventricle contracted, the

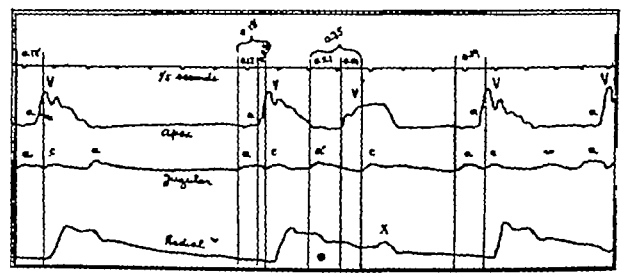

Fig 3—Record on a rapidly moving piece of a paper First a normal contraction followed by an extra auricular contraction, but not ventricular contraction second a normal contraction followed by an ordinary auricular extrasystole, third a normal pulse without an extrasystole

semilunar valves were not opened The apparent absence of such extrasystoles causes us to favor the view that the falling out of ventricular contractions was due, not to a lack of contractility, but to a failure of impulses to cross the auriculoventricular junction

The slowing or failure of the conduction during the extrasystoles is due to the occurrence of the latter so immediately after the preceding normal beats The interval was not sufficiently long for the conductivity of the His bundle to return to its normal level A similar observation has been made on hearts whose conductivity was but slightly diminished In such hearts every contraction wave may pass from the auricles to the ventricles so long as the rate is a slow one, but if the rate becomes accelerated one or more waves are blocked at the auriculoventricular junction

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Syncope in Biliary Colic—Maggard, in the *Journal of the Kansas Medical Society*, states that the syncope which sometimes attends biliary colic is best treated by atropin, strychnin, normal salt solution and brandy Ether is a valuable heart stimulant and should be injected deeply when given hypodermatically in order to prevent the severe pain which it produces when injected superficially

AN IMPROVED AND ACCURATE METHOD OF LOCATING FOREIGN BODIES WITH THE ROENTGEN RAY *

ROBERT CAROTHERS, M D
CINCINNATI.

There are living to-day many veterans of the Civil War who have carried bullets within their bodies all these years and who have experienced little or no discomfort from them But while a foreign body within the anatomy is not always a menace to good health and it does not become necessary and imperative that it should be removed, it is undoubtedly true that foreign bodies do at times cause trouble that calls for their removal In these days of neuroses it becomes, at times imperative to remove a foreign body for the relief of neurasthenia, although it must be admitted that such removal does not always relieve the condition Since the introduction of the Roentgen ray this reason for removal is on the increase An individual who is the recipient of a foreign body does not go far before some one either on solicitation or otherwise, makes a radiogram of the part which in many instances, is known to either excite or increase neurasthenic symptoms and then the foreign body must come out

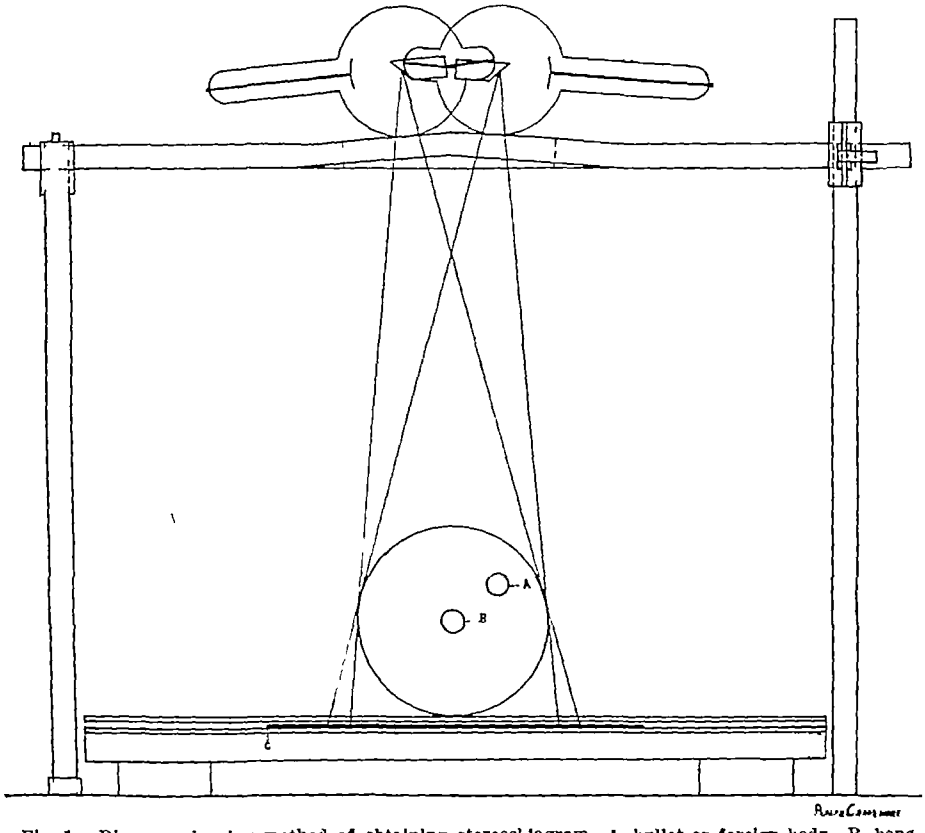

Fig 1—Diagram showing method of obtaining stereoskiagram A bullet or foreign body B bone C plate for exposure

Asepsis is of prime importance in foreign body surgery, as also is surgical experience It is no work for the novice I have seen two failures by young men who, after radiograms had been made, viewed the work from a light-hearted standpoint, but in the end were glad to have assistance Even under the most favorable circumstances it is not always easy work, leading one not infrequently, into dangerous waters and sometimes trying to the limit one's patience The easy cases in dexterous hands are misleading, and that coolness and equipoise a surgeon acquires from experience is much to be desired in this branch of surgery

If the field of operation can be made dry with tourniquet or otherwise it is a decided advantage Whatever else may be said, the most important requisite is a definite idea of the location of the foreign body The Roentgen ray has been of untold value in supplying this requirement

Stereoscopy as applied to skiagraphy, called stereoskiagraphy, is the most improved method and would seem to give the most accurate location of a foreign body The object of this paper is really to demonstrate the stereoscope This idea has been worked up by many radiographers in different parts of the country independent of each other therefore no one can claim unchallenged pri-

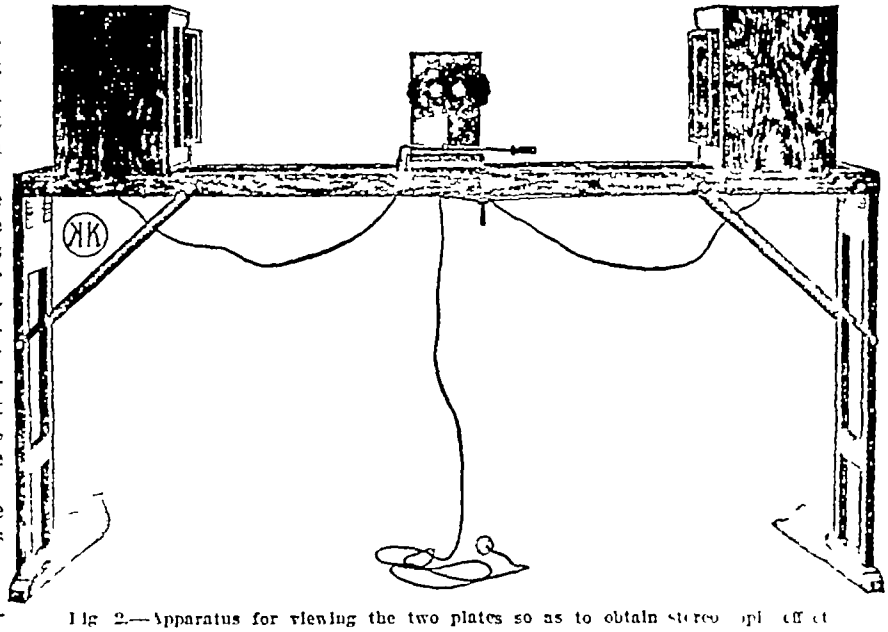

Fig 2—Apparatus for viewing the two plates so as to obtain stereoscopic effect

* Read before the Southern Surgical and Gynecological Association Baltimore Dec 10 1906

ority The instrument shown in the illustration was designed and made by Mr Kelley of the Kelley-Koett Manufacturing Co, and to him I am indebted for his mechanical skill in working out crude ideas The ordinary Roentgen ray plate looks flat The stereoscope gives a perspective view much as if the parts (bone and bullet) were before one

Two separate plates are made of the same part without changing in the least the position of the part skiagraphed, which is placed on the compression diaphragm table on a hollow board or plate holder with a metallic bottom, so that the rays can be partially obstructed, and in this way one plate can be removed and a second supplied The compression diaphragm is discarded and replaced by a hollow, double-inclined plane or platform at an angle of 160 degrees With a plumb-bob the apex of the double-inclined plane is centered through the center of the part to be skiagraphed on to the center of the plate The plates are made with the tube in the tube holder placed eighteen inches above the plate and one and three-eighths inches to either side of this central point so that they are made from points two and three-quarter inches separated from each other, corresponding to the distance between the human eyes

The developed plates are placed in highly-illuminated boxes facing each other and are from them reflected into two small looking-glasses which are placed at a right

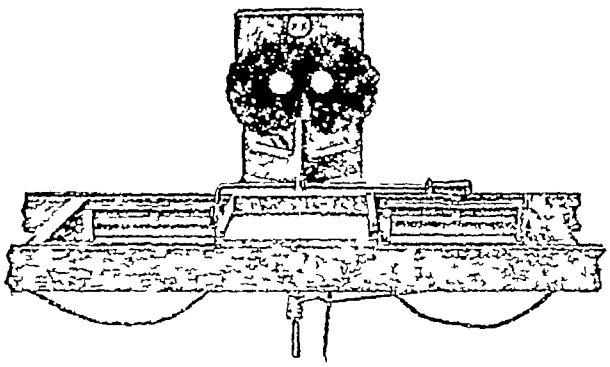

Fig 3 —The stereoscope shown in Fig 2 enlarged

angle to each other with the apex of the angle placed between the eyes of the observer in the stereoscope One now looks into the two looking-glasses, each eye in a separate glass sees a separate plate, then by adjusting the plates and the stereoscope to get an exact focus the two plates are made to look as one, giving a perspective view This method is of especial value in locating foreign bodies in the spine thorax and abdomen where it is impossible to get a plate, which is not flat, by any other method

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THE TREATMENT OF ABSCESSES BY PUNCTURE AND DISINFECTION WITHOUT INCISION AND DRAINAGE

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NEW YORK CITY

Stimulated by the results of Bier[1] and Klapp[2] with suction and hyperemia and of Lennander[3] with his carbolic-alcohol method I have been led to attempt a conservative treatment of localized suppurations without elaborate apparatus on the one hand and without incision and drainage on the other The plan I followed is not a new one It is simply a modification of older methods with a newer application What Scott Helm,[4] Hayden[5] and others tried with buboes I modified and extended to almost every form of acute external abscess The object was to avoid mutilating scars and protracted convalescence from extensive incisions and long-continued drainage Briefly stated, the method is as follows

1 After careful disinfection of the skin and under infiltration anesthesia of the most dependent portion of the abscess, the abscess is punctured with a large trocar or a pointed scalpel and the pus is gently expressed This is superior to aspiration

2 The cavity is then thoroughly irrigated through the trocar, which fits an ordinary 10 c c syringe, with a 1-1000 corrosive sublimate solution This can be used with impunity in large quantities, as the abscess well does not absorb I have found this strength to be the most satisfactory

3 The remnants of the corrosive sublimate solution are carefully expressed and the abscess cavity is partly distended with a 5 to 10 per cent iodoform glycerin A moist dressing with a firm pressure bandage is then applied

In other words, the acute abscess is converted into a chronic one by more or less thorough disinfection and treated according to the principles originally laid down by Henle[6] for the management of cold abscesses

Up to date I have treated forty-five cases of every degree and variety with rather astonishing results Most of them were cured without scarring in four or five days Turbid serum oozes from the puncture wound for a day or two, all signs of acute inflammation subside and the walls of the abscess cavity agglutinate Occasionally an induration persists for about a week, but eventually this entirely disappears Sometimes sero-pus or serum reaccumulates, but expression, or if need be, redisinfection and reinjection remedies this Rarely is a third treatment necessary

Although there were never any unfavorable complications, abscesses of caseous tuberculous glands did not yield well to this treatment These generally required a secondary curetting but were none the worse for the preliminary conservative therapy There were four of this class in my series All the other cases, whether of streptococcus or staphylococcus origin, particularly mammary and cervical abscesses, ran a very smooth course The method is somewhat painful, but perfected technic will in a great measure dispose of this disadvantage This treatment is not offered as a panacea for all acute abscesses but I am convinced of its indications and think it worthy of trial It is not suggested as a revolutionary measure, but the results justify the opinion that incision and drainage have been practiced hitherto in the treatment of circumscribed pus formation with unnecessary and indiscriminate ruthlessness and severity

I am indebted to Dr Charles Goodman, in whose department of the Mt Sinai Dispensary I carried out my treatment for the opportunity to give my theory a practical test

1356 Madison Avenue

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AN IMPROVED ADJUSTABLE ELECTRIC LIGHT STAND FOR OPERATING ROOMS

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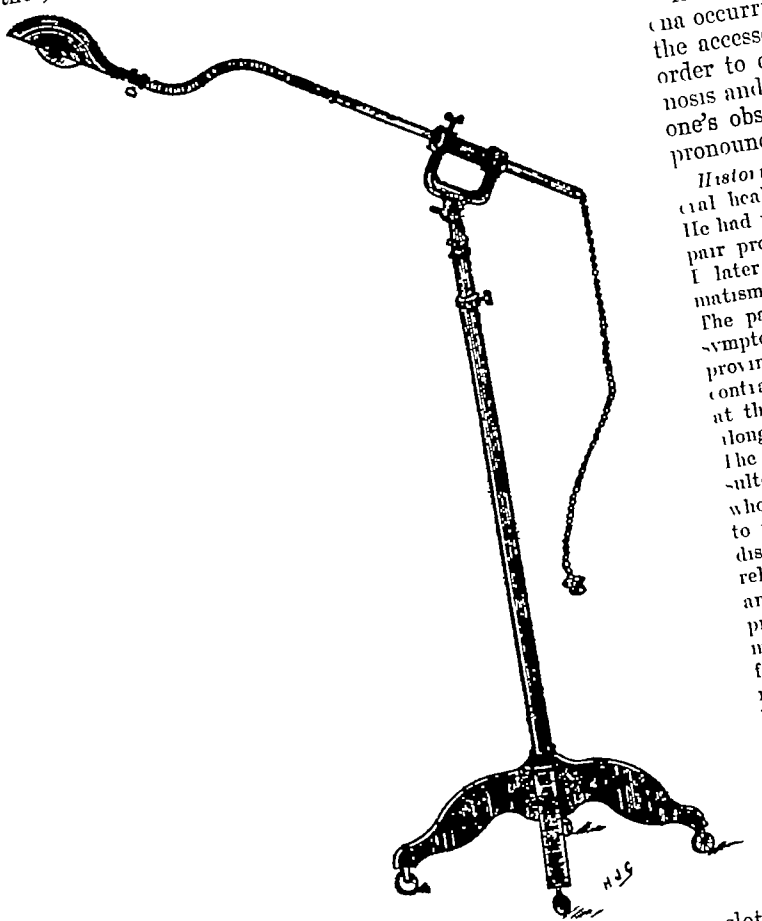
TORONTO

A feature of this standard is its universal adjustability The whole stand can be rotated on its base The height of the lamp can be regulated by the inner tube of the upright The extension arm can be shortened or lengthened, tilted up or down or shortened and used vertically

The standard consists of a heavy tripod base mounted on rubber-tired castors Attached to this is an upright piece consisting of two tubes, one telescoping in the other, the movement of the inner tube being controlled



by a thumb screw At the top of the inner tube a slot engages a U-shaped bracket, which can be tilted up or down and is retained in position by a winged screw A short tube is brazed into the ends of the bracket

The upright piece of an ordinary goose-neck electric light stand is pushed through the tube in the bracket, where it can be clamped if necessary The flexible part of this horizontal arm is of sufficient length (eight inches) to enable one to turn the light in any desired direction

The lamp itself is a spiral filament stereopticon of 24 candle-power with no frosting and is shaded by an aluminum reflector so fastened as to allow of its being turned about the lamp in directing the light toward any side

This apparatus has been found especially useful in mastoid work, for which, indeed, it was originally intended The stand is placed behind the anesthetist and the horizontal arm, covered with sterilized towels is stretched forward over the patient, where the light, with the aid of one hand only, can be instantly and easily adjusted to illuminate the operative field or turned up toward the head-mirror of the operator This appliance has been in use in the New York Eye and Ear Infirmary for the past year, and has given satisfaction It is manufactured by the Hospital Supply Company of New York

12 Carlton Street

ACUTE FRONTAL SINUSITIS

C M HARRIS M D
Ophthalmologist to the Conemaugh Valley Memorial Hospital
JOHNSTOWN, PA

Although writers frequently refer to ocular phenomena occurring as complications or symptoms of disease of the accessory cavities of the nose, I report this case in order to emphasize the importance of differential diagnosis and to illustrate the fallacy of too strictly limiting one's observation to the organ which exhibits the more pronounced symptoms

History—A minister, aged 39, gave a history of good general health except for a chronic rhinitis of moderate degree He had worn glasses during the past sixteen years The latest pair proved to be lenses for the correction of simple myopia I later found a marked degree of compound myopic astigmatism, which being corrected, greatly improved the vision The patient had always been singularly free from the usual symptoms of eyestrain, seeking glasses only as a means of improving vision In the latter part of the winter of 1897 he contracted a "cold" which was followed by excruciating pain at the root of the nose on the right side, extending outward along the supraorbital region and upward toward the vertex The right eye was painful and sensitive to light. He consulted an ophthalmologist in the city where he then lived who pronounced it "optic nerve inflammation" and proceeded to treat the eyes After a week of almost unbearable pain, a discharge of greenish pus appeared in the right naris and relief was prompt Almost four years later after moving to another state, a similar attack developed In spite of the previous history, another specialist treated the eye without so much as examining the nasal cavities Another week of suffering, a flow of pus, and it terminated as before In February of this year I saw him for the first time He related his history and stated that he had recently been suffering from a "cold" For two days past excruciating pain in the right inner supra orbital and frontal regions and right eye had prevailed

Examination—Light pressure over the eye and frontal sinus could hardly be borne The eye was also exceedingly sensitive to light The vision on comparison with the fellow eye, and with test after recovery, was about what one would expect in neglected myopia with astigmatism The fundus appearance can be described in the same way The left nasal passage was negative except for a moderate rhinitis The right side, however, presented more rhinitis, and the middle turbinate was turgid and had a glazed appearance

Treatment—After application of adrenalin and cocain an attempt was made to probe the frontal duct but it proved futile An alkaline wash and an adrenalin spray were prescribed for nasal application Acetanilid compound was given for pain, and atropin for its effect on the mucous membrane He returned next day, reporting slight relief Another attempt at probing proved successful A small amount of pus appeared and relief was almost immediate The turgidity of the middle turbinate and the flow of pus continued for about ten days Absolutely no subjective symptoms have since been present

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[For other information see second page following reading matter]

SATURDAY, MAY 11, 1907

APPENDICITIS AND ANGINA

According to Kretz,[1] acute phlegmonous appendicitis may be associated with acute tonsillitis, and in these cases streptococci occur as the predominating organism in the appendix, in the peritoneal exudate, and in the tonsils

These conclusions are based on observations made after death, in cases in which the conditions were favorable for satisfactory study and all which occurred in young persons without previous attacks The changes in the tonsils are marked There is great swelling, pus oozes from the crypts on slight pressure, the tissue is succulent and there is edema of the surrounding structures, there is also swelling of the cervical lymph glands Microscopically, in addition to the ordinary inflammatory changes, the tonsils show thrombosis of the lymph vessels and small fibrinous thrombi in the veins, but without purulent softening In the cervical lymph nodes there may be large masses of cocci in the subcapsular sinuses and fibrin mixed with leucocytes and cocci in the central and efferent lymph vessels So far as the changes in the appendix are concerned, they indicate that the process begins in the follicular tissue, whence it may extend to the peritoneum, either directly by continuity or in the form of lymphangitis in the mesentery

As regards the route of the infection, assuming that the appendicitis is secondary to the tonsillitis, then the following possibilities must be considered Pyogenic cocci may be pressed out of the tonsils in the act of swallowing and carried to the intestine, or the cocci may be transferred to the appendix by way of the blood In favor of the latter as the more likely route speak the conditions already described in the tonsils and in the cervical lymph nodes, whence bacteria may pass directly into the blood (tonsillogenous bacteriemia), and the conditions in the appendix itself and the adjacent parts of the intestinal tract, especially when death ensues early, indicate clearly that the inflammation begins about minute foci of necrosis and miliary abscesses which correspond accurately in size and location to the lymphatic follicles, and which undoubtedly result from mycotic embolism, minute masses of cocci being found within the vessels in the center of the follicles These interesting follicular foci were observed by Kretz in the cecum and also in the otherwise normal ileum

Naturally, Kretz supports the hypothesis already advanced by others that acute appendicitis in certain cases may be the result of a general infection which originates in a streptococcal tonsillitis and angina The localization of the bacteria in the lymphatic apparatus of the intestine may be regarded as analogous to the localization that occurs in the bone marrow in acute osteomyelitis In these cases (14) that serve as the basis of the work there was, as stated, no evidence of previous disease in the appendix, and the course of the disease was rapid and severe Kretz points out that in certain cases of acute appendicitis of moderate severity there may be a history of attacks of tonsillitis shortly before the appendicitis And in several cases of subacute appendicitis examined after death Kretz found marked changes of a somewhat chronic nature in the tonsils and enlargement of the cervical lymph nodes He suggests that when appendicitis develops some time after an attack of angina it is less dangerous because the body has had time to arrange for its defense and is, therefore less likely to be overwhelmed by the infection

These observations again emphasize the importance of the tonsils in the etiology of various pyogenic infections Kretz estimates that probably one-third of fatal pyogenic infections are associated with angina as an initial lesion, and he suggests, as others have done before him, that undoubtedly many acute, more or less transitory febrile conditions are in reality mild anginal or postanginal bacteriemias He also points out that Semmelweis really was the first to announce clearly that many apparently heterogeneous inflammations—acute endocarditis, osteomyelitis and arthritis, acute pericarditis and acute inflammations of other serous membranes—really belong together by virtue of a common mode of origin, namely, acute angina And we now know that all these manifestations of infection may result from localizations of the same infectious agents, the most important of which undoubtedly is the streptococcus, for the entrance of which the tonsils offer specially favorable opportunities There is need of careful systematic clinical studies of the relation of tonsillar infections to acute appendicitis in order that the special characteristics of appendicitis as a manifestation of tonsillogenous bacteriemia may become better known.

1 Verh d. Path. Ges. 1906 x p 229

TYPHOID BACILLUS BEARERS AND THE PREVENTION OF TYPHOID FEVER

We have called attention to the investigations which have been carried on in the past few years, especially in Bavaria, bearing on the transmission of typhoid fever by apparently healthy individuals Such cases have been shown, as the work has progressed, to be not infrequent The Germans call them *Typhusbacillentraeger*, but in the absence of precedent in our own language for the manufacture of such compound words we must call

them typhoid bacillus carriers or bearers In a certain small district in Bavaria bacteriologic examinations of the discharges have shown over fifty infected persons When we consider how difficult it is to trace epidemic outbreaks of typhoid to their source, the importance of such individuals becomes apparent In the recent Scranton epidemic, for example, evidence showed plainly enough that a certain water supply was infected, but no record of a typhoid fever patient being in a situation to affect the supply was obtained after the most careful search Doubtless some "bacillus bearer" who felt, and in fact, was, in good health carried the infection Epidemics aside, small sporadic outbreaks of typhoid fever, such as occur in hospitals for the insane, and house outbreaks in remote country places, have usually been very difficult to follow to their source Here, again the bacillus bearer doubtless plays a part That this is sometimes the case is certain, as is shown by an instance cited by Dehler,[1] in which one bacillus bearer kept up a small outbreak

The important question regarding the bacillus bearers is what is to be done to detect them and to prevent them from infecting others? So far as detection is concerned we know of no method now universally practicable We may reach a stage in the development of preventive medicine when a typhoid patient will be quarantined, like a diphtheria patient, until he is free from bacilli No physician who has done bacteriologic work among typhoid patients doubts that, under present conditions, hundreds of them are discharged from hospitals yearly bearing typhoid bacilli in their urine and stools This takes no account of private patients who are less carefully followed bacteriologically So long as such conditions continue, it seems a hopeless task to try to limit typhoid fever by our present method, viz, the disinfection of the urine and feces If the bacilli disappeared as soon as convalescence was established, this would be all very well, but, as the work on bacillus bearers has shown, the typhoid germ may be present in the urine or stools for months Doubtless the fecal infection is in many cases, as Dehler suggests, secondary to a gallbladder infection Doubtless, too, in some instances, as in a case quoted by this author, draining of the bile passages will cure the infection and render the individual harmless Even supposing it were possible to detect all bacillus bearers, it would not be possible to keep them under the influence of hexamethylenamin or to force them to submit to having their bile passages drained

Shall we ever be able then, to limit the ravages of typhoid fever? Certainly there is no excuse for outbreaks of the disease due to contaminated water supplies The water company which permits conditions which allow of wholesale water contamination should be heavily mulcted by means of damage suits It is doubtful that we shall be able to prevent sporadic cases of typhoid fever by educating the public in cleanliness That it can almost be done under military discipline the Japanese have shown us, but that it can be done under the circumstances of every-day life is to say the least, extremely dubious There we are dealing not with trained men under discipline, but with the ignorant, the shiftless and those of immature years unable to realize the meaning of preventive measures It almost looks as though the stamping out of typhoid fever must be accomplished by some other means than by preventing the entrance of the typhoid bacillus into the human economy

What other means of stamping out the disease do we possess? At present it would seem as though our greatest hope lay in preventive inoculation Originated by the English army surgeons, its use has recently been extended to the German army, and the statistics of Eichholtz[2] seems to confirm the view that it is a valuable procedure This author's figures are small, but like the recent English figures, they show that inoculated soldiers are less liable to the disease, and when attacked show a much smaller mortality, much fewer severe complications, a shorter course and a milder run of fever The method is still in its childhood, and may be improved Millions submit to vaccination, typhoid fever is to the layman less terrible than smallpox and it is not so indiscriminate in its attentions, but it is within the bounds of possibility that in time we shall be inoculating against typhoid fever just as we now vaccinate against smallpox

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THE FUTURE OF MEDICAL EDUCATION IN THE UNITED STATES

Medical education in the United States is, at present, in a rather unsatisfactory condition, a condition due mainly to the circumstances under which it has developed In this country the growth of medical education has followed lines quite different from those along which it has developed in Europe In Germany and France the medical school has developed as a department of the university, in England under similar circumstances or in connection with a hospital, while in the United States it has usually come into existence as a fruit of the effort of a group of ambitious medical men and has been devoid originally, at any rate, of close official connection with either a university or a hospital These remarks apply to a majority, but not to all, of the medical schools in this country

Twenty or twenty-five years ago the student at an American medical school received almost purely didactic instruction supplemented, however, by clinical observation under a preceptor which was often of a most practical kind The actual instruction in a medical school extended over two short terms the student hearing the same lectures each year Later the longer graded course was instituted and the amphitheater clinic came into vogue, and still later laboratory methods of teaching were developed, with the employment by the better

1 Münch med. Wochschr April 16 1907

2 Münch med Wochschr April 16 1907

schools of trained laboratory instructors devoting their whole time to the work. At present most, in fact practically all, of the better schools are, to use Barker's classification, on a semi-university basis. The subjects of the first two years are well, in a few instances admirably, taught by men specially trained for this purpose. The work of the last two years is still in the hands of the men who have by dint of hard work and natural ability risen above the rank and file, and stand in the forefront of the profession. Many of these men are good teachers, some are great teachers, but they are the busiest practitioners of the cities, and their practice, their livelihood, has, of necessity, first call on their time and their energy. The teachers in the clinical branches in some schools receive no remuneration, in others a scanty pittance, in a few a salary on which they can exist with the aid of consultation work. Not once but scores of times have these clinical teachers made the greatest sacrifices in the cause of teaching. Is it to be expected that the teaching work of these men, no matter how able they are, will compare with the work of men who devote their whole time and energy to the subject?

The changes in teaching have been accompanied as we mentioned recently,[1] by a great increase in the expense of medical education. A well equipped medical college is perhaps the most expensive form of technical school, and if medical teaching is to be put on a proper basis it will become more, rather than less, expensive. How to meet the demands of this increased expense is the question which the American medical college must answer. Not only must adequate laboratory facilities be provided, but a teaching hospital under the control of the school is an essential. Not only must the teachers of the scientific branches be adequately rewarded, but the clinical teachers must also receive salaries large enough to enable them at least to make their teaching their primary work. A few schools have met the problem by securing endowments from private sources, more are attempting to meet it by affiliation with rich universities. Up to the present time, however, none of the universities has placed its medical department on a true university basis. Just as the doctor's bill is generally the last to be paid, so the medical department is usually the last to which a university president pays attention.

After all it is the people who are most vitally interested in the question, for it is they who profit by the more thorough training of the physician. Has the general public done its duty by medical education? In some states the state university has a well equipped medical department including a university hospital, but there are very few of these. Minnesota has taken the lead not only in providing for high entrance requirements to its university medical school, but also in demanding that physicians coming to that state shall be educated equally as well as those from its own schools. The United States is no longer so thinly populated that there is difficulty in getting a sufficient number of physicians for the scattered population of the country districts; it is no longer so poor that it can not afford well educated physicians. The action already taken by some states indicates the lines along which help must come. The present system, however, presents certain problems. Is each state to aid only its own university medical school? If so, what is to become of the proprietary medical schools? These schools represent hundreds of thousands of dollars of capital, and, more than this, they have been built up by years of often unselfish work. Under present conditions they can not turn out well educated physicians, when the cost of educating a student—if educated as the times and conditions demand—is from two to three times the amount received from him in fees. We are forced to the conclusion, therefore, that the successful medical school of the future must receive aid. Whether such endowment shall come from the state or from private sources local conditions will determine, but that such support must come is self-evident.

1. THE JOURNAL, March 9, 1907, 880.

TYPICAL NOSTRUMS

During the last two years there have appeared in the Department on Pharmacology exposés of some of the most typical nostrums which have exploited the medical profession. No doubt some of our readers have considered it beneath the dignity of THE JOURNAL to discuss such preparations and have felt that the space would be better used if filled with scientific articles on subjects of interest to the better class of physicians. On this point there may be room for argument. These exposés are primarily educational in character; they are object lessons to show physicians how they are being imposed on. The preparations exposed have been selected from a mass of similar stuff, not because they are the worst, or the only ones, but because each is the type of a certain feature or aspect of the nostrum business. The large number of these products now offered through physicians to the public—we believe this is a good way of expressing it—as well as the amount of money spent in advertising, show to what extent this business has developed. We wish that every physician could read these articles, and that he would read between the lines as well as on them, so that he might realize the absurdity and disgracefulness of the whole business. In the preceding issue and in this one we have given considerable space—running the exposé as a continued story, as it were—to two proprietary medicines that are such typical nostrums—*outdoing* the average "patent medicine" in many respects—that we are almost persuaded to apologize for noticing them, since one would suppose no intelligent physician would be foolish enough to prescribe them. And yet, according to reports, both the Anasarcin and Anademin companies are prospering, showing that their stuff is largely used. Further these nostrums are representative of a very large class and have many of the

characteristics of the ordinary "ethical" proprietary article While pretending to give a formula, in both instances the formulas are fakes in that they are incomplete and misleading Both are typical of the fact that most of the proprietary medicines are simple mixtures, of some value possibly in certain indicated conditions if they are used with caution, while the promoters are lavish in their statements that the combinations are the result of great scientific research, etc They illustrate further the fact that the majority of such articles are put out by men who know nothing of medicine, pharmacy or chemistry, and yet assume to supply not only the medicines, but all information regarding their use In this instance there seem to be some doctors mixed up in the business, but so far as we have been able to learn they are not noted for their educational acquirements or superlative knowledge regarding either medicine, pharmacy, chemistry or any other branch of science We repeat, we publish this and similar matter for the enlightenment of the profession in regard to some phases of this nostrum evil We make no apology for doing so, but urge every physician to read this matter and, whether or not he is in the habit of prescribing nostrums, to aid the propaganda to suppress them

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PLACES MAINTAINED BY ABORTIONISTS ARE NUISANCES

One of the hardest problems to solve in the attempt to put professional abortionists out of business is the difficulty of obtaining direct evidence of a specific offense Such evidence, of course, is essential if conviction is sought on the ground that the crime of abortion has been committed If conviction can be secured on a more general charge, however, the problem seems in a fair way of being solved In our Medicolegal Department this week[1] a decision of the Supreme Court of New York is reported which has a special significance in this regard, it being the first of its kind in American legal records The defendant, an advertising abortionist, was charged with maintaining a public nuisance, which under the New York Penal Code is defined as (1) Unlawfully doing an act or omitting to perform a duty, which act or omission annoys, injures or endangers the comfort of persons, or (2) offends public decency The case was carried to the higher court after conviction of the defendant on the ground that the penal code made abortion a crime of a higher character and that there was no jurisdiction in the trial court of the offense charged as a public nuisance No previous decision could be found declaring the maintenance of a place kept for such purposes a public nuisance The court took the broad view that it was not necessary, as was technically claimed, that the actual commitment of the crime should be proved to bring the case under the statute The offense of inviting the performance of abortion and maintaining premises for its commission is in itself a crime against order and public decency A comprehensive definition such as was adopted by the court should cover a much larger class of offenses, it would seem, than those directly aimed at in the decision and it ought to be easy hereafter to put down illegal and immoral advertising offenders in New York A valuable precedent is made also for legal proceedings against like offenses in other states where the technical interpretation of the letter and disregard of the spirit of the law have too often successfully aided open violators of good morals

1 Page 1633

COMMITMENT OF SUSPECTED INSANE

Following hard on the Thaw trial, and probably as one of its results a bill has been introduced in the New York Legislature amending the criminal code of the state in relation to inquiry before trial as to the sanity of a prisoner charged with felony It makes provision for the commitment to a state hospital for the insane of such a person, at the request of either his attorneys or the prosecuting attorneys, for a period of not less than three nor more than six weeks, within which period it is assumed a correct knowledge of his mental condition can be acquired The idea is a good one, but the wisdom of the exact time limitations may perhaps be questioned In a doubtful case, such as are most of those in which the plea of insanity has been raised as a defense, it is not always possible to say that six weeks would be sufficient time to form a positive opinion as to the sanity or insanity of the accused Most experienced alienists, we think, can tell of cases in which they were not satisfied as to the mental condition of a patient after considerably longer observation than the six weeks here provided for It is possible for a paranoiac to conceal delusions over long periods and while it would be difficult for the ordinary criminal to simulate insanity successfully it would be rash to say that there might not be some so well posted in the symptoms and capable of self-control as to enable them to leave a doubt as to their mental soundness in the mind of even a skilled observer Simulation of insanity is not at all confined to the sane, and while it may be very evident, there may be underneath it a real mental aberration that may be aggravated by the attempt to exaggerate Some authorities have maintained that the attempt to sham mental disease has a direct tendency to produce it It is very improbable that the patients occasionally discharged from asylums as "not insane" have been detained, as a rule, for so short a period as six weeks, and yet no superintendent would be justified in keeping them a day after he is convinced of their mental integrity The plan, however, is a good one, and if generally adopted and properly carried out, would be in the interest of justice, would prevent the escape of some criminals from their just deserts, and, probably, prevent an occasional judicial murder It is practically followed out in some parts of the country without special legal provision for it by a little stretching, it may be of existing laws A properly drawn-up measure analogous to that proposed in New York specifically legalizing the commitment for observation and making due provisions for properly guarding the individuals thus committed (w[illegible] can not always be done in an ordinary [illegible] would be still better

Medical News

ALABAMA.

Society Meetings—At the annual meeting of the Marengo County Medical Society, held in Linden, April 13, the following officers were elected President, Dr Andrew P McArthur, Rembert, vice president, Dr John C Christopher, Nanafalia, censor, Dr James D Jones, Sweetwater, treasurer, Dr James B Whitfield, Demopolis, secretary, Dr Offa L Shivers, Jr, Linden, and health officer, Dr William L Kimbrough, Linden ——At an enthusiastic meeting of the alumni of the Medical Department of the University of Alabama, held at Mobile Medical College, April 16, the alumni association reorganized and elected the following officers President, Dr Louis W Johnston, Tuskegee, vice presidents, Drs Lewis W Desprez, Florence, and Charles Whelan, Birmingham, and secretary treasurer Dr Percy J Howard, Mobile ——At the twelfth annual session of the Alabama Medical, Dental and Pharmaceutical Association (colored), held at Birmingham, April 11 and 12, Montgomery was chosen as the next place of meeting and the following officers were elected President, Dr George H Wilkerson, Mobile, vice president, Dr Cato H Wilson Eufaula, William Hawkins, Montgomery, D L Johnson, Birmingham, and U C Robinson, Ensley, secretary, Dr Lincoln L Burwell, Selma, assistant secretary, Dr W H Brummit Taladega, treasurer I B Kigh, Birmingham, and delegate to the National Medical Association, Dr Willis W Steers, Decatur

CALIFORNIA

Trachoma at Fresno—Thirty cases of trachoma are reported among Russian and Japanese immigrants at Fresno

Public Health Association Meets—The second annual meeting of the California Public Health Association was held at Del Monte, April 15 The association recommended that a law be passed appointing a medical officer to every school to investigate the health conditions prevailing, and also make a thorough investigation of the eyes and ears of all scholars and to advise with the parents concerning the advisability of compelling weak children to attend school Dr Antrim E Osborne, Santa Clara, was elected president, and Dr Charles F Clark Woodland vice president The next meeting of the association will be held at Woodland in October

State Society Election.—At the annual meeting of the Medical Society of the State of California held at Del Monte, Monterey, April 16 to 18 the following officers were elected President, Dr George H Evans, San Francisco vice presidents Drs James A McKee, Sacramento, and John C King, Banning secretary Dr Philip Mills Jones, San Francisco, delegates to the American Medical Association, Drs H Bert Ellis, Los Angeles, Philip Mills Jones San Francisco and Oliver D Hamlin, Oakland alternates Drs Henry M Pond, Alameda Charles C Browning, Monrovia, and William F Snow Stanford University and councilors Dr George H Kress, Los Angeles, succeeding Dr H Bert Ellis, Dr Fred R Burnham San Diego, succeeding Dr Ashley S Parker, Riverside, and Dr Henry A I Rykfogel San Francisco succeeding Dr George H Evans The House of Delegates approved the efforts made toward securing the new law and, in fact approved all acts of councilors and officers during the year The House of Delegates also instructed the publication committee to advertise no preparations not approved by the Council on Pharmacy and Chemistry, but to continue until their expiration all existing contracts Coronado was selected as the meeting place for 1908

Personal—Dr Fred E Zumwalt has been appointed assistant surgeon of the Emergency Hospital San Francisco, to succeed Dr Charles B Pinkham ——Dr Edward C Sewall has been appointed eye specialist at the San Francisco County Hospital ——Dr James W Ward San Francisco has resigned from the health commission Dr Jules A Simon has been elected president of the board and Dr Henry D'Arcy Power a member ——Dr W R Ingersoll Fresno has been appointed physician at the state prison Folsom vice Dr Charles F Gladding Represa resigned ——Drs Sumner J Quint and Edward H Carrett have been appointed surgeons at the City Hospital Los Angeles ——Dr Ethel L Leonard city bacteriologist of Los Angeles has resigned ——Dr Warren N Horton formerly of St Louis has been appointed city bacteriologist of Los Angeles ——Dr Stewart McL Doherty has been appointed third assistant physician at the State Hospital Napa to succeed Dr Isadore F Cohn ——Dr Thomas M Hayden has been re elected city health officer of Fresno and secretary of the local board of health ——Dr F W Alexander, San Francisco, commander of Camp 30 was presented with a silver loving cup by the residents of the camp, April 15, on the eve of his departure for Europe

ILLINOIS

Banquet at New Hospital—The banquet for the medical staff of the Oak Park Hospital, which was postponed from March 4, on account of the illness of Dr John W Tope, chief of staff, was held May 4 Bishop E J Dunne, Dallas, Texas, gave the opening address Dr William A Evans, health commissioner of Chicago, was toastmaster Addresses were made by several physicians of Chicago

Free Distribution of Antitoxin.—Under the omnibus appropriation bill the State Board of Health will be allowed $15,000 yearly for free distribution of antidiphtheritic serum outside of Chicago The appropriations of the State Board of Health have been materially increased also, by this bill, the sum of $119,200 having been appropriated for the work of the board, against the sum of $83,320 granted by the General Assembly of 1905

New Medical Practice Act—A bill introduced at the instance of the State Board of Health, and now on final passage in the senate, will confer specific authority on the State Board of Health to establish standards of preliminary education and to determine the standing of literary scientific and medical schools, will provide for reciprocal registration of licenses, will allow the members of the board compensation for their services, and will remedy a defect in the act of 1899 by giving the State Board of Health jurisdiction over all licenses issued since July 1, 1877

New Sanitary Act.—A bill conferring additional powers on the State Board of Health has passed both houses It gives the board supreme authority in all matters of quarantine and makes it the duty of all local boards of health to enforce the rules and regulations adopted by the state board. A severe penalty is provided for violation of the regulations of the State Board of Health, which is empowered to enforce health measures in cities and villages when the municipal authorities neglect or refuse to act with sufficient promptness or efficiency, and to collect from the city or village all necessary expenses incurred

Osteopath Bill Killed.—House bill No 318, to place an osteopath on the State Board of Health, failed of passage in the house, May 2 Another bill was designed to establish a standard for medical and osteopathic schools, to license osteopaths without examination, and to confer on them "all the rights and privileges which physicians in the state now have" The State Board of Health was characterized as "an arrogant and arbitrary body having absolute power over the standards of medical schools" The bill met with the fate of the several osteopathic bills introduced in the Illinois General Assembly since 1897

Reciprocity and the State Board of Health—At a meeting of the Illinois State Board of Health and the officers of the Illinois State Medical Society, the Illinois Homeopathic Medical Association the Illinois State Eclectic Society and the Illinois Physio Medical Society, held in Chicago April 24, the committee on reciprocity appointed at the meeting held April 5, made the following report

1 After investigation the committee wish to express its hearty approval of the work of the Illinois board in promoting better reciprocal relations between states

2 We believe the plan of the Illinois board in giving credit to the old practitioner for years of practice is an eminently just and fair one minimizing as it does the inconvenience to older practitioners

3 We believe that under the present law the board can take no other position regarding the licensing of practitioners from other states

4 We believe that still better reciprocal relations between Illinois and other states would be possible if the present law could be amended so as to allow the board at its discretion to grant licenses without examination to practitioners from other states who were in practice before the adoption of the present medical practice act in Illinois

The conference approved the first three sections of the report After a lengthy discussion, which was participated in by every physician present the conference by unanimous vote, rejected the proposed amendment to the law The committee stated that the recommendation for the plan of reciprocity suggested in Section 4 was made for the express purpose of learning the views of the representatives present at the meeting as the State Board of Health had been criticised for not reciprocating in the case of licenses issued on diplomas and without examination

Chicago

Personal—Dr Emanuel J Senn returned from Europe, May 5 ——Dr L Blake Baldwin was appointed city physician, May 6

Ex-Internes Banquet—The Society of Ex Internes of St Luke's Hospital held its annual meeting and banquet April 27 Dr James T Campbell was elected president, and Dr George J Baxter, secretary

Killian to Give Clinic—Professor Killian of Freiburg Germany, will give a clinic at Rush Medical College on diseases of the nose and throat May 15, at 2 p m, to which the profession of the city is invited

Mortality to May 1—During the first four months of 1907 12,075 deaths were reported, an increase of 2 059, or of 17 3 per cent over the same period of 1906 The increase in mortality was chiefly in diseases of the respiratory tract, chronic affections and acute communicable diseases

Mortality for the Week.—During the week ended May 4 there were 764 deaths reported equivalent to an annual rate per 1,000 of 18 90 Pneumonia caused 170 deaths or 52 more than the preceding week consumption 81, nephritis 59, heart diseases 58, violence (including suicide), 44, scarlet fever, 16, diphtheria, 11, measles, 9, whooping cough, 8, and influenza, 4

April Deaths—During April there were reported 2 971 deaths, 271 more than for the corresponding period of 1906 and nearly 1 000 less than for March, 1907 As compared with March there were 112 fewer deaths from pneumonia, 47 fewer from consumption 29 fewer from scarlet fever Acute intestinal diseases caused 46 more deaths nervous diseases, 39 nephritis 22 diphtheria 22, and measles, 18

National Guard Changes—Major Charles Adams has resigned as surgeon of the First Infantry and has been made secretary to the surgeon general——Captain Samuel C Stanton has passed his promotional examination, and Dr Daniel W Rogers his examination for the medical department, and they will be assigned as major and surgeon and first lieutenant and assistant surgeon, respectively, to the First Infantry——Dr Harry D Orr has passed his examination and will be commissioned first lieutenant and assistant surgeon, and assigned to the First Cavalry

INDIANA.

Schools Not Closed.—Dr Edmund S Imel secretary of the Petersburg board of health, states that the schools have not been closed and that there has been no scarlet fever in the town within twelve months

Communicable Diseases—More than a thousand cases of measles of a mild type are reported in Muncie and Delaware County——Dr Edgar C Loehr, health officer of Hamilton County, reports eight cases of smallpox at Atlanta

Personal—Dr Arthur B Cray has been appointed health officer of Monticello vice Dr Grant Goodwin, resigned——Dr Thomas P Seller one of the oldest practitioners of Indianapolis is critically ill——Dr Marquis Creenwalt Fort Wayne, who is seriously ill, has been removed from his residence to Hope Hospital

Graduation.—The graduation exercises of Indiana Medical College College of Medicine of Purdue University, Indianapolis were held May 1 at Lafayette A class of 70 was presented to the dean, Dr Henry Jameson The degrees were conferred by President W E Stone of the university, and the address of the day was by President George L McIntosh of Wabash College on "Artists and Hucksters" The faculty of the college entertained the graduating class at a banquet in Indianapolis April 27, at which Dr John H Oliver acted as toastmaster

IOWA

State Society Meeting—The fifty sixth annual meeting of the Iowa State Medical Society will be held at Cedar Rapids May 15 to 17 The headquarters are the Montrose Hotel, and the sessions will be held in the Auditorium

Cerebrospinal Meningitis—Meningitis is reported prevalent in the northwestern part of Appanoose County——There are reported to be more than 20 cases in the village of Mystic and the surrounding mining camps——Three cases are reported at Ankeny with one death

Personal—Dr John N Warren Sioux City sailed on the *Deutschland* from New York April 30——Dr Herbert M Decker has been appointed to take charge of the bacteriologic laboratory establishment in Davenport by the State Board of Health——Dr Emil O Ficke Davenport has been appointed physician of Scott County vice Dr Charles L Barewald——Dr A Sidney Bowen Waukon has been appointed to a position in the medical service of the Canal Zone——Dr W Pitt Norris Birmingham was stricken with a cerebral hemorrhage April 20——Dr and Mrs R O Shelton Bloomfield, left for their future home in San Diego Cal, April 27

Alumni Meeting—The third annual meeting of the medical alumni association of the College of Medicine of the State University of Iowa, Iowa City was held April 30 and May 1 On the first day an address of welcome was delivered by Dr James R. Guthrie, Dubuque, dean of the College of Medicine In the afternoon clinics were held and in the evening Dr Mazyck P Ravenel, Philadelphia, delivered an address illustrated by lantern slides, demonstrating on 'A Modern View of Tuberculosis and the Role of Sanatoria" A painting of Dr Clinton J Schrader was presented to the university by Dr James R. Guthrie and was received for the university by President George E McLean On the second day Dr Joseph C Bloodgood Baltimore held a surgical clinic Dr Ravenel delivered an address on the histology of tuberculosis and other demonstrations were held In the evening the annual banquet was given at the Burkley Imperial

KENTUCKY

Personal—Dr Martin J Bartlett Louisville is at present in Riverside Cal——Dr Flavius J Taylor, Clasgow is reported to be critically ill at his home

Hospital to be Established—At the last meeting of the Mercer County Medical Society a movement was inaugurated to establish a hospital at Harrodsburg A committee was appointed to consider plans and details

LOUISIANA

Gift to Infirmary—Mr Isidore Newman presented $5,000 to the Touro Infirmary on his seventieth birthday

Insane Hospital to be Rebuilt.—The estimate of the local contractor as to the damage by the cyclone at the State Insane Hospital Jackson, is $47 000 and immediate action is to be taken toward restoration of the building

Medical Society Meeting—The East Baton Rouge Parish Medical Society, at its annual meeting held in Baton Rouge, May 14 elected Dr Charles D Simmons president Dr John A Caruthers vice president, and Dr Joseph E Heidingsfelder, secretary treasurer

Tuberculosis Sanatorium—A sanatorium for the treatment of tuberculosis is soon to be established in St Tammany Parish Mr N O Nelson of St Louis has donated $1 000 for the initial expenses The institution is to be operated under the auspices of the New Orleans Anti Tuberculosis League

Personal.—Dr Clarence E Hutchinson has been appointed superintendent of Touro Hospital, New Orleans vice John E Ellis, and Dr Ansell M Kane has been appointed junior interne to fill vacancy——Drs Dominique J Cragnon and Arthur Gilbeau have been appointed members of the board of health of Breaux Bridge

MAINE

Change of Date—The annual meeting of the Maine Medical Association will be held in Lewiston June 12 14, instead of June 5 7

Hospital for Bath.—The business men of Bath plan a city hospital, for which the late Miss Lucinda Bailey left $5,000 A like sum may be needed for equipment

Son, Not Father, Moved.—The notice in THE JOURNAL April 27 that Dr Walter L Hunt had removed from Bangor to Island Falls was incorrect Dr H J Hunt a son of Dr W L Hunt, has removed to Island Falls, succeeding to the practice of Dr Frederick W Mitchell

Home for Feeble-Minded.—At the annual meeting of the Rockland Board of Trade resolutions were adopted pledging the board to attempt to secure a location of the Home for the Feeble Minded at Rockland It is proposed to secure about 500 acres of land in the western section of the city for this purpose

MARYLAND

New Secretary for State Board.—Dr Marshall J Price has been elected secretary of the State Board of Health, vice Dr John S Fulton resigned

Health Report.—Of the 186 deaths in Baltimore during the week ended May 4 30 were from pneumonia During the week 113 cases of measles were reported to the health department

Honor for Carroll.—The University of Maryland will confer the honorary degree of LL.D on one of its alumni Major James S Carroll United States Army, at the centennial celebration to be held in Baltimore May 30 to June 2

Society Meeting—At the annual meeting of the Cecil County Medical Society at Elkton Dr Robert M Black Cecilton was elected [illegible] Dr George S Dare Rising

Sun, vice president, Dr Howard Bratton, Elkton, secretary and treasurer, and Dr Theodore A Worrall, Northeast, censor

MASSACHUSETTS

To Lay Dust—In response to a request from the Brookline Medical Club to allay the nuisance of dust on the streets, the selectmen of that town—"the richest in America"—have experimented with the chlorid of calcium process and have decided to apply it to the 65 miles of macadam roads in the town.

Disease and Death.—There were reported to the Boston board of health for the ten weeks ended May 4, 2,362 deaths, as against 2,384 in the corresponding period in 1906, equivalent to an annual death rate of 20 45 per 1,000 During this time there were 500 cases of diphtheria, with 32 deaths, 480 of scarlet fever, with 9 deaths, 53 of typhoid fever, with 4 deaths, 126 of measles, 524 of tuberculosis, with 257 deaths, and 2 of smallpox Pneumonia caused 335 deaths, whooping cough, 7, heart disease, 258, bronchitis, 62, marasmus, 26 Of those who died 383 were under one year old, 523 were under 5 years old, and 591 were over 60 years of age

MICHIGAN

Typhoid Fever—Escanaba is said to be suffering from a heavy epidemic of typhoid fever There were reported to be at least 150 cases in the city

Medical Journals Combine—The *Detroit Medical Journal* has absorbed *Leonard's Illustrated Medical Journal*, Detroit, taking over both the advertising contracts and the circulation list, beginning with the April issue

Raises Entrance Standard.—The board of regents of the University of Michigan, at its meeting April 19, decreed that "Beginning with the class to enter in the fall of 1909, every candidate for the degree of M.D, in the College of Medicine and Surgery of the University of Michigan shall show a certificate that he has had two years' work in the literary department of some first class college"

Personal.—Dr Berten M Davey has been elected city physician of Lansing——Dr Walter H Sawyer, Hillsdale, is seriously ill with septicemia——Dr Ethan A De Camp, Bannister, has been appointed health officer for Elba Township, vice Dr Charles F Patton——Dr Anson A Smith, Muskegon, has recovered from his recent illness——Dr Edward P Ward Salem, has been appointed township health officer——Dr Frances A Rutherford, Grand Rapids, returned May 1, after a few months spent in Southern California

MISSOURI.

Personal.—Dr Jesse L. Eaton, Bismarck, has been appointed a member of the board of management of the State Sanatorium for Tuberculosis, Mount Vernon——Dr Robert M Cowan, Springfield has been appointed health commissioner——Drs Julius Frischer, Paul Lux, Thomas C Unthank, William A Shelton, William L Gist and Ford B Rogers have been appointed city physicians, and Dr Eugene Carbaugh has been appointed quarantine physician of Kansas City

Cancer Hospital Report.—Since the establishment of the St Louis Skin and Cancer Hospital in July, 1905, 522 cases have come under the supervision of the institution, 439 of which were hospital cases In the hospital 151 tissue and 288 organic examinations were made During the first 18 months $15,323 02 was expended of the $15,605 94 on hand, leaving a cash balance of $283 02. The total amount of subscriptions promised is $46 495 10 and the cash on hand at the end of the fiscal year $8,196 02 The report shows that $12 500 additional is needed to carry out the work for the remaining term of three and one half years

NEBRASKA

Society Meeting—At the annual meeting of the Republican Valley Medical Society, held in Holdrege, Dr Elbert E Cone, Oxford, was elected president, Dr William A. Schreck, Bertrand, vice president, Dr Joseph N Campbell, Stamford, secretary, and Dr Peter A Sundbury, Holdrege, treasurer——Cass County Medical Society at its annual meeting, held in Louisville, elected Dr James B Hungate, Weeping Water, president, Dr Theodore P Livingston, Plattsmouth, vice president, Dr J E. Wortham, secretary treasurer, and Dr Hungate, delegate to the state society——At the annual meeting of the Hall County Medical Society, held in Grand Island, Dr Weiss was elected president, Dr J Lue Sutherland, Grand Island, vice president, and Dr Benjamin R. McGrath, Grand Island, secretary treasurer The society passed resolutions prohibiting the use of members' names in local newspapers in connection with medical or surgical cases——The Box Butte County Medical Society held its annual meeting at Alliance and elected the following officers President, Dr Harvey H Bellwood, vice president, Dr G W Mitchell, secretary treasurer, Dr John E Moore, and censors, Drs Luther W Bowman, G W Mitchell and E E Barr, all of Alliance

NEW YORK

Smallpox Closes Schools—The schools of Dundee have been closed indefinitely on account of smallpox

Signed by the Governor—Senator Page's bill, amending the charter of the Medical Society of the State of New York relative to defense of actions, has been signed by the governor

Commencement—At the commencement exercises of Albany Medical College, May 3, a class of 40 was graduated The diplomas were conferred by Chancellor Raymond and the address to the graduates was delivered by Joseph A Lawson of Albany

Personal—Dr Albert Vander Veer of Albany was the guest of honor at a dinner at the Hotel Ten Eyck, given by more than 100 of the students, who have from time to time been his students A silver loving cup was presented to Dr Vander Veer——Dr John M Farrington, Binghamton, read a paper before the Broome County Medical Society, April 3, entitled "Fifty Years in the Practice of Medicine," in which he gave reminiscences of his half century of practice in which he named in chronological order the members of the profession in the city who had died in the last 21 years——Dr William W Carleton has been reappointed health officer of Waterloo——Dr Charles W Pilgrim has resigned as superintendent of the Hudson River State Hospital, Poughkeepsie——Dr Warren L Ayer, Owego, is ill with pneumonia——Dr Robert Knight, Seneca Falls has been appointed city physician——Dr Frank W Sears, Binghamton, has been commissioned assistant surgeon, N Y N G, with the rank of captain, and assigned to duty with the First Infantry

New York City

Trachoma in Public Schools—The oculists of the health department have just completed a special investigation of trachoma among the children in the schools, and the report shows that there are 8,700 cases instead of 10,000 as had been estimated It was also stated that operative treatment gave better results than non operative, as 70 per cent of the cases treated by surgery were cured.

Personal.—Dr Joseph D Bryant had the degree of doctor of laws conferred on him at the quarterly meeting of the faculty of Cornell University Medical College, April 27 Dr Bryant has been connected with the college as professor of anatomy and professor of surgery for 39 years——Dr Charles H Archibald, while in his automobile, collided with a car and was thrown out and cut and bruised about the head

Contagious Diseases—For the week ended April 27 there were reported 543 cases of scarlet fever, with 26 deaths, 477 cases of measles, with 17 deaths, 407 cases of tuberculosis with 227 deaths, 339 cases of diphtheria, with 39 deaths, 100 cases of typhoid fever, with 18 deaths, 60 cases of whooping cough with 11 deaths, 20 cases of cerebrospinal meningitis, with 17 deaths, 1 case of smallpox, and 96 cases of varicella, making in all 2 034 cases, with 356 deaths

Moving Day for Hospitals—On April 29 the Harlem Hospital moved into its new structure on Lenox Avenue, between One Hundred and Thirty sixth and One Hundred and Thirty seventh streets There is room in the new building for 200 patients Following this move there will be a change in the district covered by the Harlem ambulances of which there are five On the same day the Fordham Hospital moved into new quarters The new hospital accommodates 150 patients and is located at Southern Boulevard and Crotona Avenue

A Paying Philanthropy—As a result of the movement to improve the dwellings of the poor which was started a few years ago four large groups of houses have been erected accommodating about 2,000 families The secretary of the association reports that in 1906 there were in these tenements 104 births and 17 deaths In one group of houses where there were 400 children there were only three deaths during the year In another group there were no deaths In addition to the improved condition of the people, these modern tenements have yielded a return of 4 per cent on the money invested, although the enterprise was not intended as a money making venture

Appropriation for Milk Booths—By a unanimous vote the board of aldermen requested the board of estimate to authorize the issue of $8,000 of special revenue bonds for the erection

of stands in the parks for the sale of milk A personal appeal was sent to each alderman by the Woman's Municipal League asking for the passage of the resolution The New York City Federation of Woman's Clubs also adopted a resolution calling on the city to provide temporary structures for the distribution of pure milk for the children of the tenements Nathan Strauss has offered to provide an abundant supply of pasteurized, modified milk, in nursing bottles, and by the glass, in addition to providing competent medical supervision of the work, if these structures are built

NORTH CAROLINA

Commencement—The commencement of the Medical Department of the University of North Carolina, Chapel Hill, was held May 8, when diplomas were awarded to a class of 11

New Building for North Carolina College—The University of North Carolina will erect a larger building for the medical department A committee of the trustees was appointed to arrange for its erection

State Sanatorium.—Dr James E Brooks, Greensboro, has been elected superintendent of the State Sanatorium for Tuberculosis, Jackson Springs The executive committee has been authorized to erect suitable buildings and to open the sanatorium, as provided for by the state legislature It is reported that a location has been selected in Moore County

District Association Meeting—At a regular meeting of the Tenth Councilor District Medical Society, held at Asheville, April 15, the following officers were elected President, Dr Lewis B McBrayer, Asheville, vice presidents, Drs William Redin Kirk, Hendersonville, Sheridan C Highway, Murphy, and Charles E Reed, Asheville, and secretary, Dr Gaillard S Tennent, Asheville

OHIO

Hospital Changes Ownership—The Seton Hospital, Cincinnati, conducted by the Sisters of Charity, has secured possession of the Presbyterian Hospital property for $50,000 The present hospital will probably be used as a home for the sisters

Typhoid Fever in Cincinnati—Nearly 2,200 cases of typhoid fever have been reported in Cincinnati since June 1, 1906 This includes the 24 wards of the city and public institutions, but not the outlying villages This would seem to be a good argument for the completion of the new waterworks

Personal—Dr O H Pinney, Cincinnati, has been appointed by the Presbyterian Board of Foreign Missions a medical missionary to Benito, West Coast of Africa, and leaves for his post of duty in July——Dr Lester Keller, Ironton, has been appointed local surgeon for the Detroit, Toledo and Ironton Railway——Dr Paul Gillespie has been elected health officer of Wyoming, Cincinnati——Dr Anthony G Kreidler has been made editor, and Dr George Strobach, managing editor, of the Cincinnati *Lancet Clinic*

PENNSYLVANIA.

Typhoid Epidemic—There is an epidemic of typhoid fever in the vicinity of Bechtelsville, near Reading Thus far there have been three deaths

Vivisection Bill Dropped—Representative Townsend's bill to prohibit vivisection has been dropped from the calendar in the legislature This action followed an address in opposition to the measure made to fifty members of the house by Dr S Weir Mitchell of Philadelphia

Hospital Overcrowded.—The State Miners' Hospital, Hazleton, is so overcrowded that it has been necessary to install additional beds for the accommodation of patients, of whom 53 are being treated During the past few months more than the usual number of accidents have occurred in and about the mines, and the daily average of patients has been from 48 to 50

Philadelphia

The Meningitis Situation.—Six new cases of cerebrospinal meningitis were reported in the city during the past few days, but the authorities assert that there is no occasion to fear an epidemic

Will Erect Food Laboratory—The Philadelphia College of Pharmacy will erect and equip a laboratory for the analysis of foods and drugs by October next, to meet the growing demands for analyses created by the national Food and Drugs Act

Tuberculous Dispensary Opened—A free dispensary for the treatment of patients suffering with tuberculosis was opened at the Jewish Hospital May 6 This is the first hospital in the city to establish a separate dispensary of this character Dr Wilfred Fetterman of the Henry Phipps Institute has been placed in charge of the work

Resident Physicians Organize—Dr Anthony Harrigan, ex resident physician to St Joseph's Hospital was tendered a reception at the Hotel Majestic by the staff of the hospital, and the Association of Residents and ex Residents of that institution Dr Edward E Montgomery was chairman of the meeting At this time a permanent organization of the residents and ex residents of the hospital was effected

Personal—Director Neff has made the following appointment to fill honorary position at the Philadelphia Hospital Neurologist and consultant, insane department, Dr Theo H Weisenburg, to succeed Dr William C Pickett, deceased Dr Weisenburg was recently appointed professor of neuro pathology and assistant professor of neurology at the Medico Chirurgical College vice Dr Pickett——Dr W M Late Coplin, professor of pathology in Jefferson Medical College, has been appointed medical director of the Jefferson Medical College Hospital, vice Dr Joseph Neff Dr Neff still retains his position as president of the medical staff, and is the newly appointed director of the city's department of health and charities

Semi-Centennial of Pathological Society—The semi centennial of the founding of the Pathological Society of Philadelphia was celebrated May 9 and 10 by a series of entertainments and scientific discussions, and an exhibition of pathologic specimens These covered a wide field of pathology and were of very great interest The exhibition was held in the Mütter Museum of the College of Physicians May 9 On May 10 the program consisted of the presentation of the following papers "The Role of Protozoa in Pathology," by Dr Frederick G Novy of the University of Michigan, "The Dynamic Point of View in Pathology," by Prof Alonzo E Taylor, University of California "The Newer Pathology," by Dr Simon Flexner, Rockefeller Institute, and "Pathology and Practice," by Dr William Osler, Oxford University, England A luncheon was given to the members at the University Club May 10, and on the same evening a banquet was tendered the visiting guests at the Bellevue Stratford Hotel

WASHINGTON

Personal.—Dr Phillip Frank, North Yakima has been appointed county physician of Yakima County vice Dr Thomas Tetreau, term expired——Dr Montgomery Russell, Seattle, is taking a trip to the Atlantic seaboard

Loses License—In the case of the State Board of Medical Examiners against James G Stewart, Seattle, the Supreme Court is reported to have decided in favor of the plaintiff, confirming the original sentence of revocation of license

The Fight Against Tuberculosis—The Yakima County Medical Society has undertaken to give a number of lectures in the public schools on the proper treatment of tuberculosis The lectures will be supplemented with pamphlets on the prevention and treatment of tuberculosis prepared by the Washington Association for the Prevention and Relief of Tuberculosis——At a recent meeting of the Snohomish County Medical Association it was decided to organize an auxiliary to the Washington Association for the Prevention of Tuberculosis and a committee was appointed to make the necessary arrangements

Meningitis—A death from cerebrospinal meningitis was reported April 14 at Gray's Harbor——During March there were 31 deaths in Seattle from cerebrospinal meningitis, and during the first thirteen days of April 8 deaths occurred——The Snohomish County Medical Association, at a meeting April 2, decided to advise the health officer to placard for cerebrospinal meningitis——Dr Wilbur N Hunt health officer of Bellingham reports 10 cases of cerebrospinal meningitis with 5 deaths——Dr Rose A Bebb, city bacteriologist of Tacoma, reports up to April 4, 42 cases of spinal meningitis The majority of patients were between 10 and 20 years of age and the epidemic is apparently subsiding

GENERAL

Personal.—Dr William Osler regius professor of medicine at the University of Oxford, England, arrived in New York April 27

No Liquor for Lepers.—The legislative committee which recently visited the leper settlement at Molokai has reported adversely on the petition that the sale of liquor be permitted in the settlement

Board of Food and Drug Inspectors Appointed.—The Secretary of Agriculture has created a board of food and drug

inspectors, consisting of Dr Harvey W Wiley, chief of the Bureau of Chemistry, Dr Frederick L Dunlap, associate chemist, and George R McCabe, solicitor of the Department of Agriculture

Plague in Hawaii—Four cases of bubonic plague are reported in Honolulu, with three deaths All the patients were Japanese and on the same plantation Samples of imported oriental foods were examined, but no clue to the infection was obtained Several rats had died on the plantation and their bodies had been burned

Medical College Association Meeting—At the annual meeting of the Association of American Medical Colleges at Washington, May 6, Dr Henry B Ward, Lincoln, Neb, was elected president, and Dr Fred C Zapffe, Chicago, was re elected secretary treasurer A report of the meeting will appear in THE JOURNAL later

American Society of Sanitary and Moral Prophylaxis.—At a meeting held in New York City, April 11, the following officers were elected for the ensuing year President, Dr Prince A Morrow, New York City, vice presidents, Prof Edwin R. A Seligman, Dr Stephen Smith and Mr Francis Lynde Stetson, secretary, Dr Edward L Keyes, Jr, and treasurer, Dr Smith Ely Jelliffe, all of New York City

Mosquito Fighters Meet.—The fourth annual meeting of the American Mosquito Extermination Society was held at the Union League Club, New York City, April 19 Dr L O Howard, Washington, D C, the government's chief entomologist, was present and told of his work Dr E Porter Felt, the state entomologist, emphasized the need of state appropriation in order to study the habits of the pest.

Health of Canal Zone—The health conditions of the Canal Zone for March are reported to be excellent Since August last the number of sick among the employés has steadily decreased, until it is now 19 40 per 1,000, as against 33 72 in August Among the 4,600 white employés there were only two deaths from disease during the month of March, equivalent to an annual rate of 5 17 per 1,000 Among the 1,200 American women and children living in Canal Commission quarters there were no deaths and little sickness The mortality from all causes for March was Negroes, 48 50 per 1,000, white employés, 15 69, and American whites, 10 34 per 1,000

American Anti-Tuberculosis League—The American Anti Tuberculosis League, organized to prevent consumption, to educate the people, to secure state aid and to establish hospitals, etc, will hold its next meeting, June 1 to 4, 1907 at Atlantic City, N J Special subjects for discussion will be 'Tuberculosis and Milk' and Tuberculosis in the Negro Race" Hon Nathan Strauss, New York who has done so much for the bettering of milk supply will preside at the meeting which takes up the subject of milk Further information may be obtained from Dr George Brown, Atlanta, Ga, president and executive officer

Carter Suggested for Opium Commission.—In the event of an international conference being called to inquire into the use of trade in and laws pertaining to opium in eastern countries it is probable that one of the members of the commission will be a representative of the United States, and for this place the Leavenworth *Times* suggests Major F Champe Carter Medical Department U S Army, as the best man since he was a member of the opium commission appointed by Secretary Taft when governor of the Philippines, as he is said to know more about the opium question than any other man in the United States and as no representative could be found who is so familiar with the subject and so well able to plan for the elimination of the evils of the opium traffic as he

The International Congress on Tuberculosis—The assembling of this congress in Washington during the last ten days of September and the first ten days of October 1908 will call together a large number of distinguished men from all parts of the world The National Association for the Study and Prevention of Tuberculosis has chosen the time and place for the congress to suit the pleasure and convenience of the foreign members and delegates and the officers believe that the congress will be a success and will demonstrate the interest of the American public in the subject of tuberculosis notwithstanding the fact that the country will be preoccupied at the time with an exciting political campaign A tuberculosis exhibition which is expected to surpass anything of the sort ever attempted is contemplated In addition to its interest to the medical profession the congress will appeal to public sanitarians and philanthropists to those interested in social science and to veterinarians The various departments of the government have become interested and are making preparations which will ensure the proper representation of the United States The National Association for the Study and Prevention of Tuberculosis will provide a fund of $100,000 for the expenses and this sum will come chiefly from the private purses of a few wealthy and enlightened men who see in this congress an opportunity to give a tremendous impetus to the movement against tuberculosis

CANADA

Army Medical Corps in Winnipeg—An army medical service corps was organized in Winnipeg, April 16 Dr William Webster will command the new unit, with rank of major, Dr Borden will be second in command, with rank of captain, and Drs D S McKay and Boardman will be lieutenants

Inspection of Schools—Medical inspection of schools in Montreal for the six months ended March 31 showed that 20,682 pupils were affected Montreal's medical health officer is urging the council to provide funds for the continuance of this work

Canadian Wins English Prize—Dr Don Armour, London England, University of Toronto, 1904, house surgeon in Toronto General Hospital in 1904 and 1905, has been awarded the Jacksonian prize, for 1906, by the Royal College of Surgeons, England This is the first time the prize has gone to a Canadian The title of his essay was "Diagnosis and Treatment of Those Diseases and Morbid Growths of the Vertebral Column, Spinal Cord and Canal, Which Are Amenable to Surgical Operation"

Personal—Dr Kenneth Panton, Portland Ore, is passing through Canada *en route* to London, Eng, for graduate work in connection with the Fellowship of the Royal College of Surgeons——Dr J R. Jones, Winnipeg, professor of medicine in the University of Manitoba, who has been recuperating in Toronto from a fractured pelvis received in a runaway accident, is going to England——Dr Robert Law has been confirmed as medical health officer of Ottawa——Dr Andrew B Eadie, Toronto, is critically ill——Dr Frederick B Bowman, Kingston, has been appointed assistant in the United States Government Laboratory, Manila, P I——Dr Edwin S Popham, Winnipeg, has returned home after a few weeks in Chicago——Dr William P Caven, Toronto, is at Atlantic City——Dr Harry J Watson, United States immigration officer at Winnipeg, is recuperating in Toronto after an operation for duodenal ulcer——Dr George R McDonough, Toronto, has returned from Egypt

FOREIGN

Venereal Prophylaxis in German Technical Schools—By a recent ministerial decree the directors of the technical schools are instructed to make provision to have the medical inspectors of the schools give instruction in sexual hygiene at the beginning of the school year

Postage Stamps to Raise Funds for Public Health Campaign—A special stamp is now on sale in Germany at a slightly increased price (5 pfennige), the surplus to be devoted to forwarding the movement against infant mortality, tuberculosis and other preventable ills

Additions to a Scottish University—On April 23 the Prince of Wales formally opened the new buildings of the Glasgow University The buildings are for the departments of physiology materia medica, forensic medicine, public health and natural philosophy, and have cost between $400,000 and $350,000

Stuttgart to Have a Club House for Physicians—The will of the late professor of surgery at Stuttgart Germany leaves $10 000 toward building a physicians' club house, $5,000 to the medical mutual benefit society, and $2,500 to one of the public hospitals Prof v Burckhardt succumbed to intestinal cancer

Official Title for von Leyden—The title of Acting Privy Councilor (Wirkl Geh Rath) has been conferred on Prof F von Leyden of Berlin, with the title of "Excellenz" This is the first time that a member of the profession representing internal medicine has had this title conferred on him by the Prussian authorities

Smallpox Quarantine in France—A quarantine has been declared against persons entering France from Metz and they are not allowed to pass unless they submit to vaccination If the epidemic at Metz continues (7 cases were reported for the last week in March) absolute quarantine measures will be enforced it is announced

Recrudescence of Plague in Australia—For the seventh year in succession Sydney New South Wales has been visited with an epidemic of plague The recurrences each year have varied in severity but this year the outbreak has been in the heart of the city and has proved a serious one According to the

Australasian Medical Gazette, there is every prospect of indefinite recurrences So far 30 cases have occurred, with 8 deaths

Free Lance Congress of French General Practitioners—This congress is a remarkable evidence of the active organization of the medical profession now going on in all countries The general practitioners of France have felt for some time that their practical interests were not sufficiently regarded by the powers that be, not even by the physicians connected with the teaching forces of the universities They are state institutions in France and as such are liable to the danger of falling into bureaucratic ruts The protest has been growing more and more general, and on April 13 nearly 1,300 medical men from all over the country gathered at Paris to discuss the two burning subjects, "Reform in Medical Education," and the "Enforcement of the Free Choice of a Physician by the Injured" More bedside instruction was demanded, more teachers, more graduate courses, etc It was shown that while Berlin has 62 professors and 107 privat docents for 1,192 students, Paris has only 73 professors for 3,000 students, and no privat docents The subject of "Medical Education in Germany" was presented by Jayle, while Jarvis reviewed the field and present status of medical education in Great Britain, and Koening described "Medical Education in the United States" The organization of a body of privat docents, outside the official faculty, and remunerated directly by the students, was discussed and steps taken in the matter While the speakers all held up for admiration the methods of medical education in other countries and pointed out the defects in the present system in France, yet all agreed that clinical instruction in the French schools bears favorable comparison with the best elsewhere in Europe, only there is not enough of it A number of professors took an active part in the proceedings

LONDON LETTER.

(From our Regular Correspondent)

LONDON, April 20, 1907

Conferment of Unusual Honors by the King on His Medical Attendants

King Edward, whose appreciation of the medical profession is well known, has conferred a most unusual honor on Sir Frederick Treves and Sir Francis Laking in recognition of "their great skill and unremitting attention" during his dangerous illness in 1902, when the former operated on him for appendicitis He has granted an "honorable augmentation" to their arms, which consists in the addition to their shields of one of the lions of the royal arms An analogous augmentation of the Prince of Wales' feathers was granted to the late Sir William Gull for his services when the King was Prince of Wales and suffered from a dangerous attack of typhoid fever But professional services appear never to have been recognized before by the incorporation of the royal arms with those of a physician or surgeon For an instance of augmentation with the royal arms it is necessary to go back to the time of Charles II, who added certain items to the shields of the Penderells of Boscobe and to the Lanes, because members of these families were instrumental in saving his life after the battle of Worcester

The Manifesto in Favor of Alcohol.

The controversial storm provoked by the manifesto in favor of the use of alcohol continues The inner history of the document has been made public, and several of the distinguished signers do not appear to be satisfied with their position It appears that the manifesto was got up by a Mr Williams, a barrister and writer on economic subjects, but not in any way connected with the medical profession Sir William Gowers whose name added weight to the document, has declared that if it were presented to him to day he would not sign it He complains that it has been twisted to justify anything, whereas, the essential point was to justify the use of alcohol in acute disease He would not have signed it if he had known that it originated with the laity Mr Jonathan Hutchinson was under the impression that Mr Williams was a physician when the manifesto was presented to him However it was sufficient for him that it had been signed by Sir William Gowers Dr Pye Smith and Sir Dyce Duckworth and he agreed with them that people are beginning to consider alcohol a poison which it certainly is not and that these extravagant views ought to be corrected Sir Victor Horsley who is one of the foremost advocates of teetotalism in the profession speaking at a temperance meeting said that the medical profession asked four years ago that every child should be taught the principles of health and temperance When he said the medical profession he added facetiously he did not mean "his 16 *bon vivant* friends" who had signed the manifesto

The Epidemic of Cerebrospinal Fever

The epidemic still continues and has appeared in fresh centers and reappeared in places from which it had disappeared In Belfast during the week ended April 16 there were 27 fresh cases, and 42 patients remained under treatment, the total number of cases now amounts to 283, with 177 deaths Cases are now being reported from better class districts hitherto exempt from the disease The deaths of three adults during the past few days has created a feeling of danger in the community The first of these deaths was of Nurse McDonnell, who contracted the disease from a patient suppposed to be suffering from pneumonia Within 24 hours Constable Egan a robust and athletic man, was stricken, and died after five hours' illness A few hours later a man named Spence, while walking in the fashionable suburb of Ballynafeigh was taken suddenly ill and died after a few hours while being conveyed home in an ambulance In Scotland, during the week ended April 30, 30 deaths from the disease were registered in Glasgow, 8 in Edinburgh, 3 in Leith, 2 in Dundee, and one in Greenock In Glasgow for the week ended April 12 there were 100 patients under treatment. Other cases have occurred in the surrounding towns In England cases are reported from various parts of the country—Nuneaton in Warwickshire Leamington and Gateshead in Northumberland and Leicester

An Imperial Conference on Hygiene and Temperance

In order to stimulate general interest in the scientific teaching of hygiene and temperance as an integral basis of national education, and to bring before the country during the visit of the colonial premiers trustworthy information as to what is done in various parts of the empire a conference will convene on St George's Day, April 23 Arrangements have been made for appointing educational experts to describe colonial systems of teaching the two subjects Papers will also be read by continental scientists

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 13, 1907

Opening of a Plague Grave

During the process of laying a new street in the center of the city of Vienna a place was discovered which had apparently been a receptacle for refuse and house waste in olden times The laborers were, however, rudely frightened by finding underneath the heaps of material several skeletons which were embedded in layers of lime This at once suggested that the place had been used as a burial pit during the last epidemic of pestilence (1789) when 12 per cent of the inhabitants of Vienna fell victims to the disease The epidemic lasted from March to November and it had become custom to inter the corpses in a layer of lime and clay, with a view of preventing further infection The reopened pest cave was at once closed, and the men were subjected to an extensive disinfection For scientific purposes particles of the clothes remnants the soil and some dust from within the cave were taken to be examined bacteriologically Although similar incidents have been reported in other places there is no instance known that in modern times an outbreak of pest has been traced to this source

Prophylaxis Against Epidemic Meningitis

The board of hygiene in Vienna has recently issued an order to all district officers of health as well as a public notification dealing with the means of fighting the spread of meningitis which during the last year has been epidemic throughout the empire As the best means for prophylactic treatment the instillation of pyocyanase is recommended This is a serum produced by the action of the bacillus pyocyaneus on certain tissues Dr Cehle an assistant at the pediatric clinic of Vienna, has instituted extensive experiments with this substance and has found that the diplococci or rather meningococci, which are found so often in the mucous secretions of the nose and pharynx of persons suffering from cerebrospinal meningitis are destroyed within 48 hours if a few drops of the pyocyanase are placed on the mucosa of the nose This new remedy is not an antitoxin but acts more like a disinfectant perhaps by influencing the mucosa in such a way that its secretion becomes antagonistic to the diplococci In the order issued by the board it is recommended that every physician nurse relation or friend of the patient should submit themselves to the prophylactic treatment which is entirely devoid of danger and each physician is requested to submit his observations on this point to the board of health The quantity of pyocyanase at disposal in Vienna is as yet rather small but in the Children's Hospital a laboratory has been fitted out with all the apparatus necessary for its production

Pharmacology

Scientific Pharmacy Abroad Worthy of Imitation.

We have before us a pamphlet which we refer to American manufacturers of pharmaceuticals for their careful consideration. The pamphlet is entitled "Directions for the Examination of the Pharmaceutical Specialties. E. Merck, Darmstadt." It has been prepared in response to a request of the German apothecary society, and contains descriptions of Merck's proprietary products. For each product the description states the chemical constitution, the physical properties, and the *tests whereby the identity and purity of the product may be verified*. American manufacturers could well afford to offer similar publications. Since physicians are beginning to realize that many products are not what they pretend to be, reputable manufacturers will no doubt court the investigation of their preparations. They can do this most effectually by placing at the disposal of those interested tests whereby the quality of their product may be verified.

MEDICINAL FOODS

Report of the Council on Pharmacy and Chemistry of the American Medical Association

The following report was submitted to the Council by the subcommittee which examined the medicinal foods.

To the Council on Pharmacy and Chemistry.—In order to determine the food value of any food product it is necessary to consider the following points: *Chemical composition, available potential energy, absorbability and cost.* No attempt is made in this article to discuss each of these features separately, but they are utilized as required.

The ingredients on which the food value of any article of food depends are the proteid substances, carbohydrates, fats, certain inorganic bodies and—under certain conditions—alcohol. The amount of each of these present in a preparation must be established by chemical analysis. From the results thus obtained it is possible to calculate the potential energy represented by a given food product. In this report the potential or food value is expressed in the large or kilo calorie, that is, the amount of heat required to raise the temperature of one kilogram of water one degree centigrade.

Foods are more or less completely absorbed, and the total energy of some of the bodies absorbed is not completely utilized by the animal organism, because the oxidation of certain substances is incomplete. The factors employed in this report for expressing in calories the actual amount of energy utilized by the system are 4.8 for proteid substances, 4.1 for carbohydrates, and 9.2 for fats. Various factors are employed for this purpose, for example, 4.23 for proteids of animal origin and 4.1 for proteids derived from a mixed diet, but the above are satisfactory for all practicable purposes.

The accompanying table embodies the results obtained by submitting all the well known so called "predigested foods" to chemical examination. In most cases two samples of the same brand were purchased at an interval of about six months. All the analyses were made before Jan. 1, 1907. Inasmuch as the chief object of this investigation is to ascertain the food value of the products under consideration, the figures represented by the first six columns will be passed over with this comment that some of the preparations contain much glycerin which does not, so far as known at present, possess any recognized food value, although there are a number of experiments on record to indicate that it influences metabolism.

The amount of inorganic material varies materially, from 0.18 to 1.61 per cent. It consists, so far as tested, of salts of sodium, potassium and calcium, and phosphates and chlorids.

The percentage of nitrogen accredited to each of these products represents the total amount of nitrogen, irrespective of the nature of the nitrogenous substances. This basis is giving the several preparations more value as food products than they actually represent, but inasmuch as it is difficult to ascertain how much of each nitrogen bearing substance present will be utilized by the system, the benefit of the doubt is given to the preparations, and the entire percentage of *nitrogen present in each is made the basis of proteid contents.* The proteid matter present in these foods consists largely of peptones and proteoses. The latter correspond to less advanced stages of hydrolysis than the former, but for dietetic purposes they may be regarded as of equal value.

By multiplying the percentage of nitrogen found by the factor 6.25 we obtain the percentage of nitrogenous matter (proteids) contained in the various preparations. It should be stated in this connection also *that the factor 6.25 is probably a little too high.* By using this factor the percentage of nitrogenous matter present in the several products investigated varies from the lowest, 0.43 per cent., to the highest, 6.38 per cent. By multiplying the number of grams of nitrogenous matter present in 500 grams of material by the factor 4.8 it is found that the potential energy available by the nitrogenous matter varies from 10.3 calories to 153.1 calories. Five hundred grams of the material is made the basis of calculation because it approximates a pint, the amount usually believed to

TABULATED RESULTS OF

No.	Name of Preparation	Name of Manufacturer	Price per bottle	No. of Cc. in bottle	Cost per 500 Cc.	Reaction	Specific gravity	Per cent. non volatile residue	Glycerine and undetermined matter
1	Carpanutrine	John Wyeth & Brother	$1.00	325	$1.54	Acid	1.090	39.00	28.45
2	Carpanutrine	John Wyeth & Brother	1.00	325	1.54	Acid	1.090	34.40	21.29
3	Liquid Peptones	Eli Lilly & Company	1.00	450	1.11	Neutral	1.029	15.18	3.03
4	Liquid Peptones with Creosote	Eli Lilly & Company	1.00	450	1.11	Neutral	1.052	22.40	4.34
5	Liquid Peptonoids	Arlington Chemical Company	1.00	425	1.18	Acid	1.047	16.66	0.23
6	Liquid Peptonoids	Arlington Chemical Company	1.00	425	1.18	Acid	1.049	18.98	2.0[illegible]
7	Predigested Beef	H. K. Mulford Company	1.00	475	1.05	Acid	1.010	10.33	3.40
8	Predigested Beef	H. K. Mulford Company	1.00	475	1.05	Acid	1.011	11.70	4.37
9	Nutrient Wine of Beef Peptone	Armour & Company	1.00	425	1.18	Acid	1.077	31.27	14.97
10	Nutrient Wine of Beef Peptone	Armour & Company	1.00	425	1.18	Acid	1.076	30.10	13.70
11	Nutritive Liquid Peptone	Parke, Davis & Company	1.00	500	1.00	Acid	1.039	16.61	1.02
12	Nutritive Liquid Peptone	Parke, Davis & Company	1.00	500	1.00	Acid	1.038	17.10	1.95
13	Panopepton	Fairchild Brothers & Foster	1.00	325	1.54	Acid	1.063	22.00	2.60
14	Panopepton	Fairchild Brothers & Foster	1.00	325	1.54	Acid	1.023	22.40	4.86
15	Peptonic Elixir	Wm. Merrell Chemical Company	1.00	475	1.05	Acid	1.050	18.76	3.21
16	Tonic Beef S. & D.	Sharp & Dohme	1.00	400	1.25	Acid	1.048	20.28	12.91
17	Tonic Beef S. & D.	Sharp & Dohme	1.00	400	1.25	Acid	1.046	19.67	12.63
18	Liquid Peptone	Stevenson & Jester Company	1.00	450	1.11	Neutral	1.039	3.67	.44
19	Cow's milk (2.8 per cent. fat)				.05		1.033	13.00	

*Total calories *per diem* dose includes the calories of alcohol in

be present in the various trade packages, and because it affords a ready basis of calculation

There are no fatty substances present in these products, their food value from this point of view is, therefore, nil

Another group of food constituents to be considered in these preparations is the carbohydrates They are represented by cane sugar, maltose, dextrin and invert sugar Lactose is probably also present in some, but it is impossible to establish this The total amount of carbohydrates present is represented by the column headed "after inversion" By referring to these percentages it will be found that the variation ranges from 0 55 to 15 57 By multiplying the number of grams of carbohydrates present in 500 grams of the foods by the factor 4 1 we obtain the potential energy represented by the carbohydrate, which varies from 11 3 to 319 2 calories By adding together the total calories represented by 500 grams of the foods in question, of both the proteids and carbohydrates, we have a variation ranging from 54 7 to 397 5 calories The total food value of an equal quantity of milk, including fat, approximates 360 calories

The value of alcohol in the hands of the physician is recognized by most practitioners and is frequently resorted to in severe cases of illness Its value as a food product pure and simple in disease is, however, an open question There is no doubt whatever but that it acts to a certain degree as a food even here, not as a tissue builder, but as a saver of fat and carbohydrate material, and in order to give the preparations in question full value as food products, the calories, represented by the alcohol, are credited to each preparation, as are the proteids and carbohydrates The factor usually recognized for expressing the calorific value of alcohol is 7 The percentage of alcohol by weight present in the various preparations under consideration, varies from 12 0 to 18 8 By multiplying the number of grams of alcohol present in 500 grams of material by 7, the number of calories varies from 420 to 658

On looking over the literature and printed matter distributed by some manufacturers, the physician is frequently left under the impression that these preparations contain all the essential constituents necessary for maintaining normal nutrition of the body, as is clearly shown by the following quotation "Contains sufficient nutritive material to maintain normal nutrition of the body, a valuable food in typhoid fever, pneumonia, tuberculosis, and all the conditions of the system associated with enfeebled digestion and malnutrition"

In order to show the insidiousness of such representations it is only necessary to give the actual food value of the average daily dose (the average amount to be taken for twenty four hours) recommended by the various manufacturers for their products The average adult daily dose recommended varies from 50 to 150 c c. The total available calories per daily dose based on the proteid and carbohydrate bodies varies from 9 8 to 110 5 Adding to these figures the amount of energy represented by the alcohol, in each case, the total available calories varies from 55 0 to 299 5 The number of calories required *per diem* by a man doing very moderate work approximates 3,000 In sickness this amount is not required, but on the average it should not fall much below 1,500 calories during twenty four hours

In order to get a fair conception of the actual food value of these various preparations, it is desirable to make some comparison which can be readily comprehended by every physician The amount of good milk necessary each twenty four hours to sustain the vitality of a patient during a serious illness is not less than 64 ounces or approximately 2,000 c c. The food value in calories represented by this amount of good milk may be placed at 1 430 This includes not only the proteid and carbohydrate matter, but the fat as well By comparing this available potential energy with the total energy available in the predigested foods under consideration it can be readily seen that if a physician depends on the representations made by some of the manufacturers, and feeds his patient accordingly he is resorting to a starvation diet The largest number of available calories, including alcohol, present in any of the recommended daily doses, is less than one fifth of the number of calories represented by 2,000 c c. of milk, and the calories represented by the daily dose of the preparation poorest in food products is only one twenty fifth of the amount present in 2,000 c c of milk These figures tell their own story

Making 2 000 c c of milk the basis of calculation and estimating the amount of the various preparations required to yield this number of calories it is found that the quantity to be administered daily to supply 1 430 calories including alcohol, varies from 716 2 to 1500 2 c c. In other words, it will be necessary, in order to supply 1 430 units of energy *per diem*, to administer the amount of the various products in quantities found within the above limits In many cases the amount of alcohol exhibited by these quantities would keep the patient in an alcoholic stupor continually The cost necessary to supply this energy varies from $1 48 down to $3 30 Compare these prices with the cost of two quarts of milk Is farther comment necessary

The average number of calories represented by 500

EXAMINATIONS OF MEDICINAL FOODS

No	Ash	Per cent. nitrogen	Per cent nitrogenous matter (0 25)	Calories as proteids in 500 grams	Carbohydrates: Before inversion	Carbohydrates: After inversion	Calories as carbohydrates in 500 grams	Calories as proteids and carbohydrates in 500 grams	Alcohol: By volume	Alcohol: By weight	Calories as alcohol in 500 grams	Average recommended adult dose per diem in Cc.	Calories as proteids and carbohydrates per diem dose	*Total calories in per diem dose	No. Cc. required per diem to supply 1430 calories	Cost per diem to supply 1430 calories
1	0 93	0 685	4 28	102 7	4 22	5 34	109 5	212 2	15 5	12 5	437 5	60	25 5	78 0	1100 7	$3 39
2	1 09	0 990	6 24	149 8	3 73	5 78	118 5	268 3	17 3	14 0	490 0	60	32 2	91 0	942 9	2 91
3	1 00	0 719	4 50	108 0	0 00	0.05	124 0	232 0	22 0	18 0	630 0	150	69 6	258 6	829 4	1 84
4	0 75	0 615	3 84	92 2	0 00	13 47	276 1	368 3	22 0	18 0	630 0	150	110 5	299 5	716 2	1 59
5	0 93	0 780	4 93	118 3	6 56	10 57	216 7	335 0	17 5	14 0	490 0	150	100 5	247 5	866 6	2 06
6	0 90	0 725	4 53	108 7	6 83	11 53	236 4	345 1	17 8	14 1	493 5	150	103 5	251 5	852 7	2 01
7	0 18	0 381	2 38	57 1	4 29	4 37	89 6	146 7	19 7	16 0	560 0	150	44 0	212.0	1011 7	2 13
8	0 19	0 415	2 59	62 2	4 50	4 55	93 3	155 5	19 0	15 5	542 5	150	46 7	209 5	1024.3	2 17
9	0 23	0 102	0 64	15 4	11 67	16 43	316 3	331 7	21 5	17 5	612 5	100	66 3	188 8	757 4	1 79
10	0 40	0 069	0 43	10 3	13 10	15 57	319 2	329 5	20 9	17 0	595 0	100	65 9	184 9	773 3	1 82
11	0 84	0 298	1 86	44 6	12 58	12 89	264 2	308 8	23 0	18 8	658 0	120	74 2	232 1	729 5	1 47
12	0 80	0 186	1 16	27 8	17 78	13 19	270 4	298 2	21 8	17 7	619 5	120	71 5	220 2	779 [illegible]	1 56
13	1 10	1 020	6 38	153 1	5 76	11 92	244 4	397 5	18 5	15 0	525 0	50	29 8	92 3	777 0	2 [illegible]
14	1 16	1 013	6 33	151 9	5 96	10 05	200 0	35[illegible]		17 0	595 0		[illegible]8	95 3	750 [illegible]	[illegible]
15	1 15	0 406	2 54	61 0	11 40	11 46	234 9				577 5			157 2	818 0	1 [illegible]
16	1 01	0 544	3 40	81 6	1 48	2.36	48 4				420 0			[illegible]7 0	1300 0	3 25
17	1 74	0 524	3 28	78 7	1 49	2 22	45 5				[illegible]0			57 9	1234 4	3 09
18	0 87	0 288	1 81	43.4	0 55	2 55	[illegible]				0			[illegible]4	1706 8	3 34
19	0 07	0 560	3 50		80	[illegible]								6	2000 0	0 [illegible]

the liquid medicinal foods

grams of these products as proteids and carbohydrates is 260 6 The total average calorific value of the same amount of these foods is 802 4

The number of calories represented by good brandies or whiskies, containing 45 per cent of alcohol, is 1,575 In other words, the average calorific value of these preparations is approximately one half that contained in either good brandy or whisky From this it must not be concluded, however, that equal quantities of brandy or whisky are twice as valuable as the medicinal food because the medicinal foods contain some material which can be utilized in building tissue, which is not the case with either whisky or brandy

From the above it can readily be seen that not only is the patient receiving a starvation diet when the physician resorts to these preparations, but that the unfortunate sick are also compelled to pay exorbitant prices for the amount of actual nutritive matter received

It is urged in justification of the use of preparations of this class that they contain constituents not found in our ordinary foods and in a more perfectly assimilable condition As pointed out above, these so called predigested foods contain no fats, the carbohydrates in them are the ordinary sugars present in our common foods, while the proteins belong to the peptone or albumose class It is for these latter that the greatest claims are made, but even here no value can be pointed out not found in whey, peptonized full milk or peptonized skimmed milk

There is likewise another point of considerable importance to consider in this connection The terms *peptone* and *albumose* include bodies of very uncertain composition, and their suitableness as food substances depends largely on how they are prepared Animal experiments have shown that nitrogen equilibrium may be maintained, for a time at least, by use of enzymic hydrolytic products of the proteins, even where the hydrolysis has been carried far beyond the so called peptone stage, but it appears to be likewise true that the mixtures secured by acid or high temperature steam hydrolysis have no such value Some of these, indeed, may exhibit a toxic behavior This is true in particular of some of the commercial varieties of peptone, and until more is known of the source of the bodies of protein character employed in the make up of these "predigested" mixtures it is unwise to assume anything concerning the food value of the nitrogen compounds found in them by analysis or even to dignify them by the name of foods

Your subcommittee makes the following recommendations

1 No liquid medicinal or predigested food shall be approved by the Council which contains less nutritive value, exclusive of alcohol and glycerin, than milk

2 At least one fourth of the nutritive value of the food, exclusive of alcohol and glycerin, shall reside in the nitrogenous matter

3 The label shall bear a statement whether the peptones and proteoses are produced by enzymes or otherwise

4 No package or advertising matter of any character shall bear representations which would lead the physician to believe that a food contains more nutrients than it actually does, or that it alone can sustain life for a limited period, if the dose advised contains less than 100 calories, exclusive of alcohol and glycerol, per diem dose

5 Solid or partially evaporated products shall conform to the above standards when calculated to the water content of milk, viz. 88 per cent

The report of the subcommittee was adopted by the Council and ordered published. W A PUCKNER Secretary

ANASARCIN AND ANEDEMIN

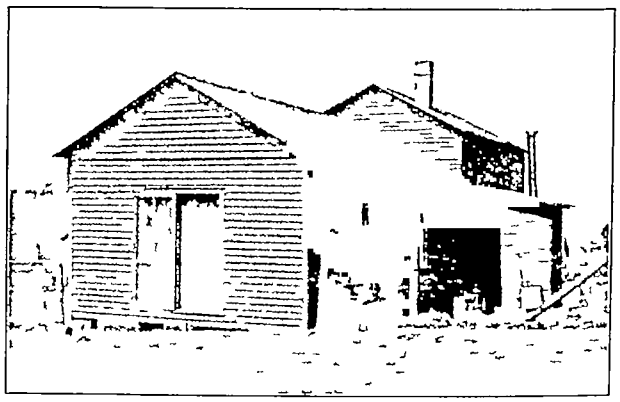
(*Concluded from page 1536*)

ANEDEMIN

If we are disposed to doubt the vaunted scientific ability of the Anasarcin Company, we are forced to admire their business methods, at least if there is any truth in the saying that imitation is the seal of success Anasarcin has had this rather undesirable compliment paid to it for its native town of Winchester has given birth to another remedy, Anedemin, which looks like a fair haired twin brother The Anedemin Company has adopted Anasarcin almost bodily The name—"opposed to edema"—is about as close as the copyright laws permit The pharmacologic and therapeutic claims agree almost literally with those of Anasarcin and contain the same exaggerations and dangerous misstatements There is the same emphasis on free purgation with Epsom salts The dose is the same Both are marketed at two dollars for a box of 100—only the Anedemin people have adopted the prize package device of throwing in 20 or 30 tablets extra, for good measure, and give a discount of 75 cents or so

In short, the Anedemin Company has appropriated all of Anasarcin which they considered of any value It is, therefore, rather suggestive that they drew the line at the formula Anasarcin is said to contain squill, sambucus and oxydendron, Anedemin discards the oxydendron and reinforces the squill with strophanthus and apocynum Notwithstanding this material change in composition, the actions are described as identical, this is again rather suggestive

The Anedemin Company, like the Anasarcin Company, scorns crude drugs and claims to use only the isolated principles It was saved the trouble of discovering active principles for strophanthus and apocynum, for these are known, but it managed to find some scope for its inventive genius, "both drugs being so chemically treated and disposed as to absolutely eliminate all objectionable and disagreeable properties and effects" so as to convert a vasoconstrictor action into a dilator action, so as to render them non toxic and non cumulative, so as to



Laboratory and Warehouse of the Anasarcin Chemical Company Winchester Penn

deprive apocynum of its characteristic nauseant effect Who can say that the days of miracles are past? Even this is not the limit of Anedemin alchemy, if we are to believe their claims, they have succeeded in forcing strophanthin, apocynum, scillain, etc, to combine with each other "It is a *definite chemical compound* of the active principles" of these drugs! This makes the achievements of Emil Fischer in synthesizing sugars and proteids appear as mere child's play

Since the formulas were completed, however, clinical reports have been numerous enough—almost too numerous, if we are to believe them Anedemin has been on the market for less than three years, the circulars emphasize that testimonials and endorsements are not solicited Nevertheless, we are told that it is "endorsed by over fifty thousand clinicians throughout the United States" Since the total number of physicians in the United States and Canada is only about 128,000 this means that nearly every second physician has endorsed Anedemin The Anasarcin Company solicits endorsements and they seem to do the larger business Hence the majority of physicians of the United States must have written an endorsement of either Anedemin or Anasarcin or both Or is this statement another 'invention?' It is a little peculiar that nearly all the endorsements come from small towns in sparsely settled districts practically none from the centers of population Does this mean that dropsy is more common in the rural communities than in the cities?

THE INVENTORS OF ANASARCIN AND ANEDEMIN

Even the newspapers, when they tax our credulity with pretended scientific "discoveries," feel the moral obligation of justifying themselves by telling us something of the personality and experience of the discoverers We may ask, therefore, who are these expert pharmaceutic and synthetic chemists, these manufacturers of active principles, these skilled clinicians of wide experience, who have "intelligently built up the formula by wide application?" What are we told of these men who ask us to believe, on their mere assurance, in miracles and feats of magic, who tell us that they have converted neutral principles into alkaloids, that they have effected definite chemical compounds between these neutral principles, that they have discovered principles that do not exist, that they have changed the actions of these principles to suit their wishes, that, in short, they have reversed the laws of Nature?

These companies are located in Winchester, Tenn, a town of about 1,500 inhabitants, situated in an agricultural country The town boasts of neither scientific schools, colleges, universities nor laboratories The Anasarcin Company was organized in 1902, the incorporators and directors being Dr John W Grisard and his sons, Dr John P Grisard, B A Grisard, and A F Grisard, and Will W Walker, all of Winchester Dr John W Grisard seems to be the originator and promoter of Anasarcin W E Walker is an insurance solicitor of Winchester and is not actively identified with the business We are informed that he owns but a single share of stock having a face value of $100, and that he was added to the company in order to comply with the laws of Tennessee, which require five directors for any corporation Dr John W Grisard, the father, has practically retired, but still has a general supervising interest in the business There is no regularly licensed pharmacist or chemist connected with the company The office is in the rear of a jewelry store in the business part of Winchester and on the second floor above According to our reporter, an office force of about ten stenographers and clerks handles the correspondence and labels and sends out the preparation which is made in a crude frame building located on a side street and without laboratory equipment According to our reporter, the work is done by the Grisards and a colored man

The Anedemin Chemical Company was organized in 1905 with a capital of $20,000, the incorporators and directors being Dr T B Anderton, Floyd Estill, J J Lynch, J M Littleton and I G Phillips, all residents of Winchester, and all lawyers with the exception of Dr T B Anderton A Mr Gordon, a clerical employé of the company, is reported to have active charge of the business, to prepare the medicine and conduct the correspondence The office headquarters, laboratory and complete outfit of the Anedemin Company comprises two rooms over the law office of Estill and Littleton No one connected with the company is a regularly licensed pharmacist or graduate chemist

Of the six physicians located in Winchester, three of them (50 per cent), are engaged in the dropsical cure business Poor Winchester! Aside from their connection with these two nostrums, these physicians may be estimable and worthy citizens, but where, pray, did they find the extensive clinical facilities and pharmaceutical knowledge necessary for their wonderful and epoch making discovery? Were they aided in their scientific work by the four lawyers connected with the Anedemin Company or by the insurance solicitor who is a director of the Anasarcin Company? Did the 1,500 inhabitants of the town furnish the vast clinical material necessary for discovering and working out the formulas of these two preparations? If so, we fear that dropsical affections are much more prevalent in Winchester than in any other known spot on the globe This matter should be investigated Without doubt the vital statistics of Franklin County would be most interesting and we commend them to the special attention of the medical profession in Tennessee

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Naming of Carbon Compounds.—Oxy indicates an oxid, thus ether U S, $CH_3.CH_2O CH CH_3$, is ethane oxy-ethane Often 'oxy" is used to indicate hydroxyl, thus phenol is called oxy benzene, resorcinol of phendiol is called dioxy benzene, etc.—*Pharm Rev*, September, 1906

Correspondence

The Adaptation of Clinical Methods to the Practicing Physician.

Chicago, April 24, 1907

To the Editor —Some years ago I was desirous of studying clinically surgical work on a certain anatomic region of the body Living in Chicago, where clinics in abundance in this department of practice, as in others, are accessible, the project seemed a very simple one I tried, and to my surprise, found the plan impracticable At the clinics attended for this one purpose there was presented a great variety of cases, which, not appealing to me then, merely served to consume my time Thus I wasted hour on hour in order to get at even one case I wished to see I gave up the idea then and I should have to give up such a project to day It was not at that time and is not now practicable to expect a clinician to keep a score of men in mind and telephone them of the cases to appear at his clinics

Thinking over the reason for my fruitless experience I came finally to understand the difficulty Our clinical methods had their origin in the instruction of undergraduates, and they have never been altered to meet the widely different demands of the physician The undergraduate knows little or nothing of medicine and, therefore, one case appeals to him with about as much interest as another And this to a large but lesser extent is true also of those postgraduate students who are attempting to cover a field completely with which they are not familiar And it is, to be sure, true also to a small extent of all physicians, especially when in a half serious mood But the present clinical arrangements are such that the advantageous utilization by the mature physician of clinical facilities is almost an utter impossibility The idea of adapting them to the practicing physician has never been worked out, or apparently never conceived

What is chiefly needed is that the physician shall be enabled to select out of the whole number of cases to be presented in a particular city each day those capable of appealing to him at that time This selective need is absolutely fundamental in the best mature study, for each individual mind possesses its own store of knowledge different from that of any other mind, and the need for adding to this store is all the time changing It is this selective aid which makes the index to periodicals and books so valuable that without it education would, except for unusual minds, hardly advance beyond the rudiments The failure of clinicians to recognize the fundamental value of this indexing principle is responsible for the comparative uselessness of clinical instruction to the physician What is needed is that the physician shall be directed by a clinical index exactly where to go to satisfy his clinical needs, precisely as he goes to the book index for direction as to printed knowledge And the evident fact that such an index could not be so perfect or so complete or so exactly applied as that for periodicals or books, does not practically affect the question Usefulness, not perfection, is the stamp of practicableness

This plan calls for the indexing of clinical cases of whatever character occurring in all the medical teaching institutions of each of our cities, especially the large clinical centers To a certain extent it implies interference with the present strictly institutional plan of postgraduate study If each postgraduate school be compared to a medical periodical the plan proposes not to confine the physician to one magazine, but to open them all before him and by means of an index allow him to read where he may derive most advantage It represents a positive advance in our methods of medical study What a tremendous aid it would be to the out of town physician to feel that he could at any time step over to a large clinical center and attend case after case exactly, or nearly exactly as his needs required instead, as now, of wasting most of his time on cases which only slightly appeal to him The usefulness to the home physician of clinical instruction would be still more increased because his needs could be exactly fulfilled at any time On the whole, attendance would be enormously stimu

lated The schools would doubtless adopt a uniform low price for each clinic attended

It goes almost without saying that each clinical center should publish a permanent, frequently revised, schedule of its fixed clinics This should be done whether the more important and more far reaching plan I am proposing is adopted or not Such a schedule would be of great advantage especially to out of town physicians

Granting it possible to index clinical instruction, what form would such an index assume? This instruction is transient, changing each day and completed each day It must evidently be indexed daily Each morning, then, a new index of that day's instruction is required It must also be made readily and cheaply accessible to every medical man in the city Is there a practical way of issuing such a daily clinical index? Undoubtedly there is Two possible courses are available The first necessity whichever plan is utilized is the establishment of a central editorial bureau to whom clinicians may telephone at the close of each day their clinical plans for the day following, so far as these can be foretold The information may then be made known to the physicians, either (1) by answering telephonic inquiries only, or (2) by printing the material in the evening or night and either mailing it or distributing it by carrier, on the following morning The first method is undesirable because its usefulness would be too limited The second, if the distribution were directly to physicians, would possibly be too expensive to be completely practical A compromise plan of distributing this daily clinical index to certain central stations easily accessible to all physicians (as for example, either all or certain drug stores), seems practical and easily carried out Clinical plans which could not be foretold early enough for the publication, if sufficiently important, could be telephoned later, perhaps in the morning to the editorial bureau, there to be on telephonic demand when requested by physicians

Who should bear the expense is a matter for consideration It is possible that most drug stores would be glad to pay a fair subscription price for a periodical attracting physicians to their stores It is possible also that certain schools might pay a proportion of the expense, at any rate through the way of advertising It is certain that large numbers of physicians, especially those from out of town, would either buy copies (which should be on sale) as needed, or would subscribe for a longer or shorter period At any rate, hundreds of physicians would manage to find means to consult such a clinical index if it existed Advertising would help largely

It is important that this project should be executed not by private enterprise, but by collective medical effort In this way only can full cooperation be secured, and, especially, can objectionable advertising of clinicians be avoided The names of clinicians should not appear in connection with their clinics Which shall be the first of our cities to take this important advance step?

ELMER L. KENYON, M D

The Great American Fraud

ROGERSVILLE, TENN, April 19, 1907

To the Editor —Undoubtedly untold benefit has resulted from the literature exposing the "patent medicine' fraud and the methods of the advertising quacks, but, unfortunately, the great body of the people who stand most in need of enlightenment have not been reached by these publications High priced magazines, like *Collier's Weekly* and the *Ladies Home Journal*, do not reach those who live in the rural, and especially in the mountain, sections Residents in the towns and cities buy the cure-alls and patronize the "quack specialist" to some extent, but nothing to compare with the former class These are a simple people often remote from capable physicians, they rely on doctoring' themselves making their diagnoses from advertising matter of "patent medicines" They see only a small amount of literature aside from the county paper, which comes to them weekly and the mass of nostrum advertisements brought by the R F D man All this literature is read with avidity The weekly paper filled with fraudulent advertisements is read from top to bottom each week going over the same matter the medicine advertisements are looked on as advice direct from the editor, a man of great veneration and learning Many of these families are very poor, and often sell the last cow, their chickens and eggs (thus depriving themselves of the only proper food for the sick available to them), to raise money to send for a supply of "Dr King's New Discovery for Consumption" or some one's "cancer cure"

Out of many cases I have witnessed permit me to mention two which recently came under my observation

CASE 1 —In the latter part of May, 1906, I was sent for to amputate the breast of Mrs M. T, aged about 55, who resided in this town I found her in great agony A cake of absorbent cotton covered the entire left breast, arm, side and back, down to the crest of the ilium About three months prior to this time she had discovered a small, freely movable tumor about the size of a robin's egg in the left breast, it was not attended with pain or any discomfort She became somewhat alarmed, and her sister, with whom she lived, found an advertisement in their religious paper of "Dr" D M Bye and his "Wonderful Oil Cure for Cancer" For many weeks prior to the time I saw her she had been using the "oil cure," with the result that all the skin and part of the flesh was burned off from the extensive region covered by the absorbent cotton, which had become converted into an extensive scab (I see from one of his letters to her that the application of cotton was directed, and that in her case the "oil" had been somewhat modified, making it stronger) The condition was septic in the highest degree, suppuration and absorption going on beneath the cake of cotton I was able to remove the "dressing" by insinuating peroxid of hydrogen beneath it, the whole coming off in one solid mass The wound had the appearance of a deep seated burn The lump in the breast, I was informed, had undergone no perceptible change The woman was in a pitiable condition and no operation was considered She died from sepsis and exhaustion in two days after coming under my observation

The little tumor, while probably malignant, was not a factor in her taking off, but death, in my opinion, was directly due to the corrosive applications made by direction of "Dr" Bye It appeared that she had paid the Bye concern $500, and at the time of her death a box of the "treatment" arrived at the express office, for which $50 had been paid The Bye concern refused to take it back or to allow the sister anything whatever for it, although they had guaranteed a cure Removal of the growth was the only treatment that should have been considered in this case

CASE 2 —Mrs B, a widow, with several small children totally blind from absolute glaucoma, had been told by myself and other physicians that nothing whatever could be done to restore or in any manner to benefit her sight She was written to by "Dr Coffee Eye Specialist," who, without the least idea of the nature of her trouble, undertook to guarantee a perfect cure The woman was very poor, but she managed to pay him $8 a month for more than two years When she could no longer raise the necessary amount, he reduced the fee to $5, and this payment was kept up for many months, until it became utterly impossible for her to pay him anything whatever He used the "absorption' method His letters to this woman are before me and are cunning and ingenious They explain in a graphic manner that a "membrain" has formed over the sight, and just as soon as his medicine "absorbs the groath" her vision will be as good as ever, that "vision would not return as long as there was a vestage of membrain," that the "membrain was growing thinner all the time," and that it would return very suddenly and that it would be disastrous to give up treatment that maybe one more application of his absorbent would have been sufficient

Now, what I propose is that an effort be made to raise a fund sufficient to have the *Collier's Weekly* and *Ladies' Home Journal* articles on "patent medicines" published in cheap pamphlet form for distribution among the people who can not be reached in the ordinary way This would be the most vital blow that could be given this colossal fraud Such a pamphlet would be read and passed from house to house It would open up a side to this subject undreamed of by the people to whom I refer It is almost a universal belief that these "patent medicine" establishments are the source of all medical and scientific knowledge that when medical students and physicians

go off to the city to study that Pierce's concern at Buffalo, N Y, or some other like concern is the great institution of learning the students attend

Yet it appears somewhat ironical that an organized effort should be necessary to save the fool from the consequences of his folly and to provide protection for the gullibility against which common sense should be a sufficient safeguard

J E Miller, M D

[Comment—"The Great American Fraud" articles are published in pamphlet form by the American Medical Association with permission of *Collier's Weekly* They make a pamphlet of 146 pages, with 65 illustrations, which is sold at less than cost (see advertising page 39, this issue), the object of the Association being to keep these articles in circulation In this pamphlet both of the frauds mentioned by our correspondent are exposed

"Dr" Bye it is who, with the proceeds of his blood money, has established a church in Indianapolis His "literature" oozes with piety In it we find that "surely God's blessing attends the oil cure," which for blatant blasphemy would be difficult to equal He was listed by Adams under the "cancer vampires"—a classification which seems peculiarly appropriate "Dr" Coffee is also one of the "mail order" specialists He has illustrated his "literature" with pictures stolen from Haab's "External Diseases of the Eye" These illustrations, with fabricated legends under them, are used to show what miraculous cures are wrought by the "Absorption Treatment as Originated and Perfected by Dr Coffee" Coffee is strongly endorsed by the editor of his local paper, Mr Adams wonders whether prompt payment for advertising space enters as an element into the testimonial

Apropos of the above, we quote the following from the *Ohio State Medical Journal for April*—Ed]

"There is little doubt that the most effective weapon now in possession of the medical profession, with which to fight charlatanry is the reprint from *Collier's Weekly* Put this little book in the home of every man in the state and the problem of suppressing charlatanry is solved It impresses every reader with its truthfulness It is an unanswerable document, showing that this traffic in drugs by pretenders to medical knowledge is, indeed and in fact, the Great American Fraud What are we going to do about it? Shall we recline supinely and expect the people to run after this information? People are not consumed with anxious desire for this knowledge but they accept it if it is properly offered Every society should order enough copies for the use of members and for public and private distribution Secretaries of county societies should see that book sellers and news stands have them on sale Libraries should be supplied and the reading public should find easy access to information which can not be obtained in any other way It is not derogatory to professional dignity to engage in the work of rescue of the deluded and misled people Members of the state legislature should have information on the questions contained in the reprint If the profession is as zealous as the charlatans the work will prosper"

Teach the Public that Medical Practice Is More Than Drug-Giving

Dodge City, Kan, April 23, 1907

To the Editor—Will you permit a suggestion with regard to the fight against the nostrum industry? Much good has been done by Mr Bok and Mr Adams by their exposure of the conscienceless exploitation, by nostrum vendors, of human suffering It is to be hoped that much reformation has been accomplished in medical ranks by the Council on Pharmacy and Chemistry and by medical writers on nostrums and the sins of physicians in prescribing nostrums But in my opinion the keynote to success in the antinostrum fight has not been sounded So long as we cling to the habit of prescribing something, whether the patient needs any drug or not, for the sake of holding his business, so long are we encouraging the delusion that the real value of the physician lies in the drugs that he gives regardless of the fact that at least nine tenths of his professional training is for the purpose of enabling him to ascertain the condition of the patient—to diagnose the case When the laity realize this fact they will naturally and inevitably doubt their own ability in self diagnosis and will cease to buy the ready made "dope" that now cumbers the druggists' shelves They will also cease to furnish remunerative employment for the long distance advertisers, and all the gentry who have a never failing cure for certain conditions

Another thing which ought to be strongly impressed on the laity is that there is in every living organism a power that makes for health, that tends to restore the normal condition when it is overthrown—the *vis medicatrix naturæ* of the old writers A proper appreciation of this fact will deprive the nostrum vendors of a vast amount of undeserved credit for cures And if it be said that it will also deprive the attending physician of credit which would otherwise be given him, it is admitted But is it not better to have the just appreciation of intelligent people than the undeserved adulation of the ignorant? The one will remain constant the other is proverbially fickle The effect of such teaching on christian science and similar fallacies can easily be foreseen and requires no comment

To do this is not a light task, and it is not to be accomplished in a day, but it is necessary to the welfare of the people, and to furnish a proper soil for the development of our profession How can it best be done?

Is it not naturally the work of the local medical society to educate the people of the neighborhood to a proper appreciation of a profession that concerns them so intimately as does that of medicine, not only individually but through newspapers and by other printed matter? If it be objected to this that we should be imitating the quacks, I can only answer that as long ago the churches decided that the devil should not have the best music so now it is surely time that the monopoly by quacks of the best means of disseminating information should cease "Truth is mighty and must prevail" in a fair field But if the truth is bottled up and not allowed to get into the open it is not surprising that falsehood scores a triumph

Whether or not this public teaching be done, the duty of the physician to his patient is clear to give him the best service in his power, and then charge him a reasonable fee for it But to hide a real service under a needless prescription is basely to prostitute the profession and to perpetuate the mental fog which envelopes the public with reference to the practice of medicine W H Graves

The Book on Fractures by Lamb—An Explanation

Benton Harbor, Mich, April 13, 1907

To the Editor—In The Journal of April 13, 1907, p 1281, appears a letter from D S Lamb, Washington, D C, relative to letters coming to him from various parts of the country requesting copies of "New Methods of Reducing Fractures and Dislocations" I think I may be able to explain where Mr Lamb's letters came from, and why A traveling contortionist gave an exhibition in this city about two years ago, and among other things, he told the physicians who were present that if they would write the curator of the National Medical Museum giving name, they could get gratis a book on new methods of reducing fractures and dislocations, published by the United States government So far as I know no reply was ever received to the letter written from here

Fred P Belknap

[Dr V M Griswold Fredonia, N Y sends similar information about the visit of this professional dislocator at Dunkirk, N Y—Ed]

Miscellany

Investigations Concerning Nostrums in Germany—On several occasions The Journal has referred to the fact that the Pharmaceutical Institute of the University of Berlin is investigating the patented and other medicines exploited over there, in a way similar to the work being done by the Council on Pharmacy and Chemistry In the *Apotheker Zeitung* Dec 22, 1906 are reported the recent investigations by J Koehs of the Pharmaceutical Institute, which indicate that Ion

which has been advertised as a ferrous saccharate, is in fact a mixture containing ferrous citrate with some ferric salt and sugar In other words, it is not what it has been advertised to be Kochs has also investigated grandira, a remedy for syphilis, advertised as containing 30 per cent. of calomel, but actually containing but 9 per cent F Zernik investigated aspirophen, found that it is not amidophenacetin, acetyl salicylate, as claimed, but is a mixture of molecular proportions of free salicylic acid and monoacetylphenocoll Zernik has also found that formurol is a mixture of about 37 5 per cent. of hexamethylenamin, with 62 5 per cent of a mixture of neutral and acid sodium citrate. This preparation has been introduced as a remedy for gout and advertised as sodium hexamethylenamin citrate The above named articles, so far as we know, are not yet advertised in this country

The Doctor

The following poem was written by James Whitcomb Riley in memoriam of Dr W B Fletcher of Indianapolis, (who died April 25) and was published in the Indianapolis *Morning Star* on the day of the funeral

THE DOCTOR

He took the suffering human race
He read each wound—each weakness clear—
And struck his finger on the place
And said 'Thou ailest here—and here'"
—MATTHEW ARNOLD

We may idealize the chief of men—
Idealize the humblest citizen—
Idealize the ruler in his chair—
The poor man or the poorer millionaire
Idealize the soldier—sailor—or
The simple man of peace—at war with war —
The hero of the sword or fife-and-drum
Why not idealize the Doctor some?

The Doctor is by principle, we know
Opposed to sentiment he veils all show
Of feeling and is proudest when he hides
The sympathy which natively abides
Within the stoic precincts of a soul
Which owns strict duty as its first control
And so must guard the ill lest worse may come
Why not idealize the Doctor some?

He is the master of emotions—he
Is likewise certain of that mastery—
Or dare he face contagion in its ire
Or scathing fever in its leaping fire?
He needs must smile upon the ghastly face
That yearns up toward him in that warded place
Where even the saint like Sisters lips grow dumb
Why not idealize the Doctor some?

He wisely hides his heart from you and me—
He hath grown tearless of necessity—
He knows the sight is clearer being blind
He knows the cruel knife is very kind
Oftimes he must be pitiless for thought
Of the remembered wife or child he sought
To save through kindness that was overcome
Why not idealize the Doctor some?

Bear with him praverful in his darkest doubt
Of how the mystery of death comes out
He knows—he knows—aye better yet than we
That out of Time must dawn Eternity
He knows his own compassion—what he would
Give in relief of all ills if he could
We wait alike one Master—He will come
Do we idealize the Doctor some?
—JAMES WHITCOMB RILEY

Home Treatment of Tuberculosis—B R Shurly, Detroit states, in the *Detroit Medical Journal*, that there are certain fundamental principles in the treatment of tuberculosis at home which must be omnipotent The care by day and night of the infectious sputum requires the most constant attention to every detail A newspaper cornucopia pinned to the mattress should receive the sputum rags or papers from the bedridden patient, and a destructible box or cup should be used by the ambulatory individual If tuberculosis is to be limited the bacilli must be destroyed Success of our methods requires the eternal vigilance of the attending physician Among the intelligent the difficulties are appreciated and the value of sunshine, fresh air and disinfectants are readily understood Among the uneducated element and in dispensary practice, it is necessary to resort to printed instructions to which frequent attention is called It is Shurly's plan to place a member of the family in charge of the patient and to make him responsible for the proper management of the five fundamental principles of treatment First, the destruction of the infective material, second, fresh air and sunshine in abundance, third, rest, fourth, pure food and drink to the limit of digestive capacity, fifth, the use of medicine as directed by the physician and in no other manner This supervision is supplemented by visits at intervals of a trained nurse, who is especially instructed in the hygiene and care of the consumptive The ingenuity of the physician alone can direct the proper method of supplying the greatest amount of sunshine and fresh air to the patient The problems of fresh air supply, diet and rest, especially during fever, must be worked out for the individual along the lines of the fundamental principles and carried out with the persistence of a general The fight of the consumptive for life is an up hill battle that requires masterful management and peculiar mental characteristics on the part of the physician Treatment by suggestion is an extremely important factor in the cure of tuberculosis Nature has endowed the patient with a great degree of hopefulness This confidence in the power and judgment of the physician is a valuable factor in treatment A buoyant spirit of pugnaciousness is an unfailing inspiration that frequently turns the tide of battle

Treatment of Pseudarthrosis and Tardy Callus Formation by Injection of Blood—More than two years have elapsed since Bier first called attention to the value of local injection of human venous blood as a means to hasten consolidation. V Schmieden, assistant at his clinic, reviews the experiences to date with the method in a communication to the *Med Klinik*, iii, 197, 1907 He remarks that the improvement in late years in the treatment of fractures has rendered pseudarthrosis very rare This and delayed callus formation are observed only in persons who seem to be incapable of production of callus and in whom fractures seem unable to heal In such patients the method of local injection of about 25 c c of their own or foreign human venous blood seems to have a remarkable stimulating effect He advises the simple intervention in every case of delay in the production of callus, without waiting for the development of a pseudarthrosis, and relates the histories of a later series of 11 cases which show the prompt benefits derived A syringe is used that exerts considerable pressure, the piston being moved by a thumb screw and ratchet In many instances the benefit was not apparent until after the fifth or sixth injection He makes an injection every eight or ten days, and then waits to observe the results Foreign human blood seems to be more efficient than the patient's own blood, and the effect is better when the blood is aspirated into the syringe and injected without further manipulation A violent reaction ensues, with all the symptoms of acute inflammation, but it soon subsides, generally in the course of a day

Nervous Phenomena in Children Due to Drinking Too Much Water—Millon comments on the habit which some children acquire of drinking large amounts of fluids during and between meals and at night He adds that even in adults this habit of drinking copiously is easily established and soon becomes imperious A man who is very thirsty during the first hot days of summer and drinks constantly, condemns himself to keep on drinking copiously all through the season No one notices how much a child drinks, and by the age of 10 or 12 the habit may become actual potomania, causing the ingestion of 5 or 6 quarts of water a day This excess causes dilatation of the stomach, but there is no vomiting no eructations nor cutaneous phenomena, the symptoms being generally exclusively of a nervous order Headaches, restless sleep, bad dreams and even insomnia are frequently encountered in children who overdrink in this way The child wakes with a frontal headache which may persist at times for days and weeks The character suffers from the returning headaches and lack of normal sleep The disturbances may be the result of irritation of the sympathetic from distension of the stomach by the large amounts of fluid ingested The dilatation of the stomach is not permanent, and all disturbances are soon corrected when the physician and parents succeed in restricting the ingestion of fluids within normal bounds Millon's article was published in the *Gaz d Mal Infant*, viii, 113, 1906

Cure of Chronic Albuminuria by Intercurrent Scarlet Fever—Gillet reports the case of a child of about 8 left with intermittent, orthostatic albuminuria after an attack of acute primary nephritis with anasarca, fever and much albuminuria After 4 years of this albuminuria, scarlet fever supervened, and the child was kept constantly in bed. On recovery from the scarlet fever the urine was re examined 109 times in the course of the following five years, but no traces of albumin or other signs of nephritis were ever discovered Le Gendre, he adds, has reported a similar case, and Siredey one in which the albuminuria vanished after malarial infection Gillet suggests that these paradoxic cures of albuminuria after an intercurrent infection possibly point the way to a new mode of treatment His article is published in the *Gaz d Mal Infant*, xiii 33, 1906

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES MEDICAL LEGISLATION, ETC

Pennsylvania Osteopathy Bill Vetoed

Governor Stuart of Pennsylvania has vetoed the Wickersham bill, which was passed by both houses of the legislature This bill provided for the organization of a separate board of osteopathic examiners and also for the appointment of an osteopath on the state medical board Governor Stuart's message should be carefully read, as it contains some eminently sensible and clear cut statements regarding the recognition of osteopaths He says

"That the skilful practice of osteopathy has benefited the afflicted and alleviated human suffering in many instances is an established fact It can, however, be practiced without violating the present medical practice act No legislation, therefore, is necessary to permit osteopaths to practice their profession, but there is a broad and clearly defined distinction between practicing medicine and surgery and practicing osteopathy The state is not concerned with any controversy between the different schools or sects and those who practice the art of healing but it is interested in protecting the public from incompetent practitioners of every sort Whether classifying osteopaths, who are not physicians or surgeons, with physicians and surgeons, in legislation originally designed to be applicable only to physicians and surgeons would afford any protection to the public is considered doubtful"

The governor concludes by stating that while the regulation of osteopathy may be desirable it should be provided for by legislation other than amendments to a law intended to apply only to the regulation of the practice of medicine and surgery

Medical Legislation.

An important amendment to the medical practice act has been adopted in Delaware The principal feature is the adoption of a definition of medical practice, which includes Eddyism, mental healing, osteopathy and all the latter day fads In Texas, after a prolonged struggle, the one board bill has been adopted and signed by the governor Abstracts of these two laws are presented herewith

DELAWARE

The legislature has passed an act amending the medical practice act adopted in 1895 and amended in 1899 The present amendment adds a provision that applicants who graduated prior to July 1, 1901, and who have been in continuous practice for at least five years since graduation may be admitted to examination on evidence of having completed three courses of medical lectures in different calendar years and of a competent academic education according to the requirements of that time Applicants who graduated prior to July 1, 1896, and who have been in continuous and reputable practice for at least ten years may be admitted to examination on furnishing evidence of having attended two courses of medical lectures in different calendar years and of a competent academic education according to the requirements of the time of graduation All other applicants must have pursued the study of medicine for at least four years and must present a diploma from some reputable literary or scientific college or a certificate from the faculty of Delaware College saying that the applicant is qualified to enter the freshman class of the Latin scientific course of the college

Section 14 is amended by adding a provision for a temporary license of not less than two weeks nor more than four months, which may be granted to a resident and legally qualified physician of another state who desires to take charge of the practice of a legally qualified resident physician of Delaware during the latter's temporary illness or absence from the state

In addition, two new sections are added. Section 20 defines the practice of medicine to be the opening of an office for the purpose of practicing medicine and surgery or the announcing to the public or to any individual in any way of a desire, willingness or readiness to treat the sick and afflicted in any county in the state of Delaware, or to investigate or diagnose or offer to diagnose any physical or mental ailment or disease of any person or to give surgical assistance or to suggest, recommend, prescribe or direct for the use of any person any drug, medicine, appliance or other agency whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture, bodily injury or deformity, or the receiving, either directly or indirectly, of any money, gift or other form of compensation for such services, or the use in connection with one's name of the words or letters "Dr," "Doctor," "Professor," "M D" "M B," or "Healer," or any other designation which may imply or designate that the individual is a practitioner of medicine or surgery

The usual exemptions are added regarding the administration of household or family remedies dentists or dentistry surgeons, surgeons of government services, or mechanical fitting of glasses, druggists practicing pharmacy, the treatment of corns or bunions, manicuring or massage

Section 21 provides that any practitioner of osteopathy now engaged in the practice in the State of Delaware, who holds a diploma from a legally chartered school of osteopathy and who has attended at least four terms of instruction of not less than five months each, is exempt from the provisions of the act, but that all other persons shall be examined by the medical council with the assistance of a reputable practitioner of osteopathy

TEXAS

The state legislature has passed the one board bill, and it has been signed by the governor, to become effective on July 1 This law provides for the establishment of a board of medical examiners to consist of eleven men legal and active practitioners of medicine in the state who have practiced medicine under a diploma from a legal and reputable college of medicine for at least three years No school shall have a majority representation The board is to be appointed by the governor within ninety days after the act becomes effective and biennially thereafter within ninety days after his inauguration the term of office to be two years No member of the board shall be a stockholder, trustee or member of the faculty of any medical school Certificates issued by the board are to be registered in the district clerk's office of the county in which the physician resides In case of removal to another county, the individual must register in the office of the county clerk in his new location District clerks are required to keep a record of all certificates recorded and to furnish a correct list of all the physicians registered in the county on the first day of January of each year All local practitioners of medicine in the state are required to present to the board of medical examiners evidence to establish their right to practice medicine in the state All other applicants must pass an examination before the board Reputable medical schools are defined as those whose restrictions requirements and courses of instruction are as high as those adopted by the better class of medical schools of the United States, whose courses of instruction comprise not less than four terms of five months each Examinations shall be conducted on anat

omy, physiology, chemistry, histology, pathology, bacteriology, physical diagnosis, surgery, obstetrics, gynecology, hygiene and medical jurisprudence Dentists, nurses, masseurs, medical officers of government service and physicians of other states called in consultation are exempt The board is authorized to refuse examination or a certificate for any of the following causes Presentation of any license, certificate or diploma illegally or fraudulently obtained, fraud or deception in passing examination, conviction of a crime of the grade of a felony or one which involves moral turpitude, procuring, aiding or abetting a criminal abortion, gross unprofessional conduct of a character likely to deceive or defraud the public, habits of intemperance or drug addiction calculated to endanger the lives of patients The courts are authorized to revoke any license for any of the above reasons The practice of medicine is defined to be professing to be a physician or surgeon, treating or offering to treat any disease or disorder, mental or physical deformity or injury by any system of medicine, treating or offering to treat any disease or disorder and charging therefor directly or indirectly

The new law is a great improvement over the old one, in that it provides for a general reregistration of all physicians a measure greatly needed, owing to the confusion resulting from four successive practice acts in the last twenty years It also substitutes a single board and a single standard for the triple board system formerly in vogue This is in line with the present tendency to substitute single, non sectarian boards for multiple sectarian systems The provision for an examination in the essential and fundamental subjects to the exclusion of therapeutics is also wise The sooner the public realizes that a physician's preparation and training are of more importance than the "school" to which he may belong, the better for the public and for the profession as well

A Timely Criticism.

In the *Journal of the Medical Society of New Jersey* for April appears an article by Dr Luther Halsey of Williamstown, of more than ordinary interest One paragraph, in particular, contains both a criticism and a suggestion which is most pertinent at the present time Speaking of the attitude of the medical profession toward state legislation in the past, Dr Halsey says

> Our efforts however have been to a great extent poorly generated disconcerted and spasmodic in character with no definite plan for action common to any two states and frequently even in the same state we find each succeeding legislative committee totally disregarding the work and plans of its predecessor What the profession needs and what it must have before there can be uniform ideas regarding medical legislation and concerted definite plans of action is a deliberative meeting at which to discuss and agree on the proper principles underlying the several essential features of a medical law Such a body should be made up of at least one representative of each state and territory and should hold a session of several days It takes time and deliberate thought to accomplish anything along these lines and the sooner the profession realizes the necessity of tackling these problems in the proper manner the sooner we may expect success to crown our efforts

Dr Halsey has described a condition which must be apparent to all who have been working or thinking along these lines Legislatures have been in session this winter in 36 states In 26 of these, bills have been introduced which in some manner affect the legal provisions of medical practice In states which have three examining boards, bills providing for a single board have been introduced In states which have but one board or in which the board of health is the examining body, efforts are being made to secure the passage of a law establishing more boards In some states the medical profession is advocating a single board In other states it is advocating more than one The experience of physicians who have been successful in obtaining desirable legislation in one state should be utilized by those working for similar legislation in other states Arguments and methods which have been successfully used to defeat pernicious legislation in one state should be utilized for the same purpose in another The experience of the profession in one state should be made available in others The osteopaths are systematically working to secure the adoption of uniform laws in all states Their success so far is due to the fact that the work has been directed from a central bureau and that all of their experience and influence has been focused on a single state at a time The organized profession ought to show at least the same amount of shrewdness and sagacity in securing desirable legislation for the good of the public that the Proprietary Association, osteopaths and other private interests show in obtaining legislation for personal reasons

Insurance Resolutions

The following societies have adopted resolutions on the insurance question since the last list was published in THE JOURNAL

Fort Wayne (Ind) Medical Society
Norfolk South District (Mass) Medical Society
Pima County (Ariz.) Medical Society
Somerset County (Md) Medical Society
Medical Society of the City and County of Denver (Colo)
Fayette County (Tex.) Medical Society
Kossuth County (Iowa) Medical Society
Franklin County (Pa) Medical Society
Adams County (Miss) Medical Society
Washington County (Wis) Medical Society
Columbia County (Wis) Medical Society
Fairfield County (S C) Medical Society
Scott County (Ind) Medical Society
Northwest District (N D) Medical Society

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers for the week ending May 4 1907

Wilson, James S, asst. surgeon, granted twenty five days leave of absence

Keller William L asst surgeon granted three months leave of absence with permission to go beyond the sea

Howard Deane C surgeon promoted to major and surgeon U S Army to rank as such from April 24 1907

Whitmore Eugene R asst. surgeon granted ten days leave of absence to take effect on being relieved from duty at Fort Jay N Y

Banister John M, deputy surgeon general Gandy, Charles M professor of military hygiene, and Mason Charles F surgeon, appointed members of a board of medical officers to meet at West Point N Y on May 20 1907 for the purpose of making the physical examination of cadets required by Par 25 of the General Regulations as amended by G O 74 April 13 1906 War Department.

Brechemin Louis deputy surgeon general granted three months leave of absence with permission to go beyond the sea

Wyeth M C surgeon ordered to proceed to Hot Springs Ark and report in person to the commanding officer Army and Navy General Hospital at that place for observation and treatment

Shaw Herbert G, asst surgeon relieved from duty at Army General Hospital Presidio San Francisco and ordered to Vancouver Barracks Wash for duty

Gray William W deputy surgeon general granted ten days leave of absence

Robbins Chandler P asst surgeon granted fourteen days leave of absence

Hughes Leonard S contract surgeon relieved from duty at the depot of recruits and casuals Angel Island, Cal and ordered to Fort McDowell Cal for duty

Koyle Fred T contract surgeon relieved from duty at Fort McDowell, Cal and ordered to the Presidio of San Francisco for duty

Whitney Walter contract surgeon, ordered from Fort Preble Me to Fort Wadsworth N Y, for temporary duty

Pinquard Joseph contract surgeon granted sick leave of absence for two months

Kelly John P contract surgeon ordered to accompany Troop F Fourteenth Cavalry to duty in the Sequoia and General Grant National Parks Cal

Hereford John R contract surgeon ordered from Fort Dade Fla to Fort Fremont, S C for temporary duty

Slater Ernest F contract surgeon returned to duty at Fort Banks Mass. from leave of absence

Mount, James R contract surgeon ordered to duty with field artillery from Presidio of San Francisco Cal on target practice

Richardson W H contract surgeon left Fort Sheridan Ill, with troops for San Francisco

Woolley Herbert C contract surgeon ordered to Fort Liscum Alaska for duty on Delta Gakona Cut-off, U S Military Telegraph Line and then to duty at Fort Gibbon Alaska

Stephenson Andrew V contract surgeon, ordered to Presidio of San Francisco for duty

Bell Richard P contract surgeon relieved from duty on the transport *Kilpatrick* and ordered to duty at Fort Levett Me

Wren Raphael J contract surgeon relieved from duty at Fort Totten, N Y and ordered to Fort Slocum N Y for duty

O Day Sylvester F, contract surgeon ordered to Fort Totten N Y for duty

Wing Franklin P dental surgeon left Fort D A Russell Wyo for duty at Fort Meade, S Dak.

Wolven F Homer dental surgeon relieved from duty at Fort Hamilton N Y and ordered to Fort Niagara N Y for duty

Milliken John D dental surgeon granted sick leave of absence for two months

Navy Changes

Changes in the medical corps U S Navy for the week ending May 4 1907

A. H Allen asst surgeon to duty at Lajas Cuba

C H DeLancy passed asst surgeon when discharged from treatment at the Naval Medical School Hospital Washington D C ordered to Navy Yard Washington D C

T N Phillips pharmacist, detached from the Naval Hospital New Port Lyon Colo and ordered to the Naval Medical School Hospital, Washington, D C, for treatment

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended May 1 1907

Carrington, P M surgeon, granted leave of absence for three days from April 29 1907, under paragraph 189 of the Service Regulations

Mathewson, H S P A. surgeon, granted leave of absence for fifteen days from April 27, 1907

Grubbs S B, P A. surgeon granted one day s leave of absence, May 6, 1907

Holt, John M., P A surgeon, granted leave of absence for two months from June 20 1907

Ward, W K., asst.-surgeon leave of absence granted for one month on account of sickness, from April 1, 1907, amended to read for twenty two days only

Stiles Charles W Chief of Division of Zoology, granted leave of absence for five days in April 1907

Kastle, J H., Chief of the Division of Chemistry, granted leave of absence for nine days in April 1907

Schwartz Louis, acting assistant surgeon granted leave of absence for seven days from May 2 1907

Straw E E acting assistant surgeon granted leave of absence for twenty days from April 15, 1907

Ryder L. W, pharmacist, granted leave of absence for seven days from April 27 1907

Watters, M. H pharmacist, leave of absence granted from April 1 1907, for thirty days amended to read nineteen days from April 4, 1907

BOARD CONVENED

A board of medical officers was to meet at Philadelphia April 30 1907 for the physical examination of an officer of the Revenue-Cutter Service Detail for the board Surgeon J M. Gassaway chairman Passed Assistant Surgeon T Clark Recorder

Health Reports

The following cases of smallpox, yellow fever cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service during the week ended May 3 1907

SMALLPOX—UNITED STATES

California San Francisco, April 13-20 1 case

Illinois Belleville April 13 20, 1 case, Chicago April 20 27 1 case.

Kentucky Louisville April 18 25 2 cases

Massachusetts Haverhill March 9 16, 1 case

Michigan Detroit, March 20-27, 8 cases

New Jersey Hoboken April 18-25 1 case.

Ohio Cincinnati April 19-26, 1 case

Texas Houston April 13 20, 10 cases

Washington Aberdeen April 17 4 cases Spokane, April 13 20, 10 cases Tacoma, April 13 20 3 cases

SMALLPOX—INSULAR

Philippine Islands Manila March 9 16 1 case

SMALLPOX—FOREIGN

Africa Algiers March 1 31 8 deaths

Austria Trieste, March 30-April 6, 2 cases 1 death

Brazil Para, March 30 April 6, 5 cases 3 deaths

Canada Picton County April 20, present, Vancouver, April 13-20 2 cases Winnipeg, April 13 20 2 cases

Chile Coquimbo March 30, 6 cases 3 deaths

China Hankow, March 11 25 3 cases Shanghai, March 9 23 24 deaths Tiensin, March 16-23 2 cases

Ecuador Guayaquil, March 30-April 6 3 deaths.

Egypt Cairo March 31 April 8 5 cases 1 death

France Nice, March 1-31, 40 cases 6 deaths Paris, April 6-13, 16 cases.

Germany Bremen March 16-April 6 7 cases.

India Calcutta, March 16-23, 86 deaths Madras March 23-29 1 death

Italy Turin March 31 April 7, 2 cases 1 death.

Madeira Funchal April 7 14 30 cases 14 deaths.

Mexico Aguas Calientes April 13-20 18 cases Monterey, April 14 21 1 death Tuxpam April 16 23, 1 death Vera Cruz April 13-20, 2 cases

Portugal Lisbon, April 6-13 11 cases

Russia Moscow, March 30-April 6 6 cases 1 death Odessa March 31 April 6 22 cases 2 deaths Riga March 30 April 13 10 cases St. Petersburg March 23 April 6 2 cases Warsaw, March 23-30 5 deaths

Spain Almeria, March 1 30 13 deaths Valencia April 7 14 4 cases.

Turkey in Asia Bagdad, March 9-16 present Damascus March 16-April 6, present.

YELLOW FEVER

Brazil Manao, March 23 April 6 5 deaths Para, March 30 April 6 5 cases 4 deaths.

Ecuador Guayaquil March 30-April 6 5 deaths

Java Batavia, March 16-23 2 cases

West Indies Bridgetown Barbadoes April 13 20 1 case (imported), Port of Spain Feb 9 April 13, 8 cases 4 deaths

CHOLERA.

India Calcutta March 16-23 49 deaths

PLAGUE.

Australia Brisbane Feb 8 March 9 2 cases, 1 death Ipswich Feb 8-16 1 case Kempsey Feb 8 16, 1 death Sydney, Feb 8 March 9 14 cases 1 death

Brazil Para March 30 April 6 6 cases, 3 deaths.

Chile Antofagasta March 30 16 cases 5 deaths Iquique March 30 present Santiago March 14 present Talcahuana, March 14 present

India General, March 16-23 6[illegible] 53 00 [illegible] cutta March 16-23 94 deaths

Queries and Minor Notes

COFFEE ANEMIA AND DECAYED TEETH AND PNEUMONIA

WASHINGTON D C April 29 1907

To the Editor—In the *Review of Pericics* for April it is stated (p 435) that a child in a New York public school was found by a medical inspector to be anemic from the excessive use of coffee 1 What authority is there for the opinion that this beverage could cause anemia and how much would be required to produce the effect? 2 Since the pneumococcus is present in the mouth why is it not a reasonable supposition that pneumonia may be caused by the pneumococcus entering the lymphatics through decayed teeth? W

ANSWER.—1 Authorities on pharmacology and toxicology present no facts to justify the opinion that anemia can be the result of a specific action of coffee. By deranging digestion favoring intestinal putrefaction or taking the place of a considerable amount of nutritive food, an excessive use of coffee may contribute to the production of an anemic state

2 It is generally believed that pneumonia is usually a primary localization of the bacteria in the lung with secondary bacteriemia. It is probable that in some cases the bacteria may gain access to the blood through the lymphatics and settle in the lungs as a secondary localization from the blood As invasion of the lymphatics through the teeth would be slow it seems improbable that a general bacteriemia could arise in this way Virulent pneumococci are pyogenic and would be likely to give rise to purulent lymphadenitis The suggestion of our correspondent, however deserves the attention of pathologists

THE USE OF DENATURED ALCOHOL IN MEDICINE

MT HOPE, WIS May 1 1907

To the Editor—Will you state through your columns the chemical and physiologic properties of denatured alcohol and also whether it is suitable for the making of tinctures and for other medicinal purposes? D C MILLER M D

ANSWER—For the purpose of denaturing alcohol the law authorizes the addition of various specified substances the intent being to render the liquid unpalatable and undrinkable Among these substances are gasoline and methyl alcohol It is evident that the chemical and physiologic properties of the mixture would vary with the ingredient added. As the ingredients used are generally poisonous and in some cases more so than ethyl alcohol the use of denatured alcohol for making tinctures would be not only illegal but dangerous

WANTS REPORT OF MIKULICZ S CLINIC

DR. C E PURCELL Paducah Ky asks for an English translation of the report of Mikulicz s clinic, which was abstracted in THE JOURNAL March 23 1907 page 1070 paragraph 66 This copy of the *Mittellungen a d Grenzgebieten der Med u Chir* Jena costs $10 00 and the article referred to occupies 64 pages so it will be expensive for Dr Purcell to pay for having the translation made Perhaps some of our read rs can refer him to a translation

Association News

ATLANTIC CITY SESSION

Special Tickets May Be Purchased May 30 in Central Territory

Last week's issue of THE JOURNAL was the Atlantic City Number giving the programs of the sections, railroad rates lists of hotels, meeting places and all other obtainable information concerning the approaching fifty-eighth annual session of the American Medical Association, to be held at Atlantic City N J, June 4 to 7, 1907

The dates on which tickets are good for the going trip from Central Passenger Association territory has been enlarged by the addition of Friday May 30 so that tickets are now sold May 30 to June 3 In New England territory tickets are sold May 31 to June 4 As stated last week, the rate is one fare plus $1 for the round trip Return may be made from June 4 to 10, or by deposit of ticket, departure may be delayed till June 18 Similar tickets are sold from transcontinental points May 25 to 27 and are good for 90 days There are other tickets, sold May 20 and 21, from California to the eastern gate of transcontinental territory at one fare for the [illegible] ls have been furnished to [illegible] particulars

A Proposed Exhibition of Official and Open Formula Preparations

The Philadelphia Branch of the American Pharmaceutical Association has arranged to hold an exhibition of official and open formula preparations in the Exhibit Hall at the coming session of the American Medical Association at Atlantic City This exhibition is intended to illustrate the resources and the possibilities of official remedies and to show the kind of work and the nature of the preparations that physicians can obtain from pharmacists The art as well as the science of pharmacy, largely perhaps through our own lack of interest in how we were being served, has been much neglected by far the greater majority of what have become to be known as retail druggists, who, to enlarge on their perhaps meager profits, have helped to develop the "patent medicine" business

NEW MEMBERS

List of new members of the American Medical Association for the month of April, 1907

ALABAMA.

Black, R E, Tuscaloosa
Cocke N P, Birmingham
Elrod, W A. Albertville.
Gaines V P, Mobile.
Griffin, R J, Moundsville.
Hanna, R C, Marion.
Juat, F J Florala
Matthews, E A Clanton.
Ward J H, Tuscaloosa.
Williams, W C, Shelby

ARIZONA.

Ketcherside, E. B Yinna
Mahoney O L., Phoenix.
Mahoney Virginia Phoenix.
Richards L. H Gila Bend.
Richardson G B Paradise.
Wright, F T, Douglas

ARKANSAS

Joyce M. J H, Leola
Mahan, J M., Bearden
Stout, T J, Brinkley
Vance, J O New Edinburg
Woods T J, Evening Shade

CALIFORNIA.

Bissell N C Marysville.
Dozier W E., Chico
Hogan J J Vallejo
Jacobs L. Clive San Francisco
Jones W F San Rafael
Long S F San Francisco
Pond C P Groveland
Rethers, Theodore, San Francisco
Reynolds, H B San Francisco
Reynolds R G, Upper Lake.
Seawell, J W Healdsburg
Seymour Eleanor C., Los Angeles
Van Voorhees G T Tehachapi
Wheeler I A., Healdsburg
Yates, H. N, Pacific Grove

COLORADO

Lazell E W Denver
Merrill Lilburn, Denver
Onstine, W A., Weston

CONNECTICUT

Hammond S M New Haven.
Hogan W J Torrington
Stanton J G, New London
Thompson W N, Hartford.

DISTRICT OF COLUMBIA.

Phillips W F R Washington
Reichelderfer L. H Washington
Thompson M F Washington
Wall J S., Washington

FLORIDA.

Livingston J A. Jacksonville

GEORGIA.

Allen H D Milledgeville
Bright Frank Dublin
Hall J R Carnesville P O
Hilsman A. H Albany
Jackson Max Macon
Le Conte J N Atlanta
Malov W C. Rhine
Rouglin L C Atlanta
Simmons A. B Savannah.
Tarver H R Statesboro
Thomas J M Griffin
Westbrook R J Commerce

IDAHO

Mason T R Wardner

ILLINOIS

Armstrong J B Chicago
Auld F I Shelbyville.
Bain P E, Pleasant Plains
Beck F P Oakland.
Beveridge J M Oregon.
Bourne N L Decatur
Burdick, G G, Rogers Park
Camp, C D, Chadwick
Crawford L P Earlville.
Doyle, T F Chicago
Foster, T R Kankakee
Hendricks, H P, Chicago
Hoffman, G H, Kewanee.
Johnson, Augusta E Chicago
Kaley C M., Newton
Kohlenbach, Stephen Columbia
Kinnaman G C, Chicago
Lescher, L. J, Mt. Carmel
Mikkelsen Agnes Chicago
Moss, E Bruce, Chicago
Murray A. N Chicago
Nice, D D Bowen
Peterson C R, Chicago
Pickerill J T Chicago
Rohn W C Chicago
Roth, H H Murphysboro
Salamson M. J, Chicago
Schineck, S W Mt. Carmel.
Simpson E Grant, Naperville
Slater Catherine B, Aurora.
Stubblefield, F H, Jacksonville
Svebakken O O, Chicago
Taylor R C Lilylake.
Wilson T H Chicago

INDIANA.

Arburn, Charles, Wadesville.
Breaks, L Z., Terre Haute.
Fleming C F Wabash.
Kern Aaron Wabash
Osborne H S Indianapolis
Rea C G Muncie
Shanklin R C, So Bend.
Townsend R C Osgood
Wollery Perry Heltonville.

INDIAN TERRITORY

Bagby Louis Vinita
Callaway J R Pauls Valley
Frost, C E Duncan
Lindsey J K. Elmore
Lindsey N H Pauls Valley
Nesbitt P P Muskogee
Ramsay W G So McAllister
Shuler J L, Durant.

IOWA.

Browning Eli West Branch
Case T J Unionville
Chambers, J D Davenport
Conaway A. C Marshalltown
Dittmer M. E Colesberg
Doidge R. E Perry
Geeseka O A Mt. Pleasant.
Greenleaf W S Massena.
Hanson E M Keokuk.
Harmon R Onawa
Herrick W J Melrose.
Jastram A. H Remsen
Jones M. M Ames
Langenhorst F J Ashton
Lakin A. M. Yale
Lezotte G D., Muscatine
Lillie P A Akron
Long E C Williamsburg
Lowry J D Ft. Dodge
Meis E W Sioux City
Nelson A E Centerville.
Pace A A. Elberon.
Peacock A L. Grimes
Robb E H Newton
Roost, F H Sioux City
Sloan A. N., Sioux City
Wall W R. Council Bluffs
Weston R. A. Little Sioux.

KANSAS

Barker J W Chanute
Brussler, A H, Nickerson
Button, E C Great Bend
Coldren, E V, Topeka.
Crosier, M L, Lansing
Daniels M L., Pawnee Rock
Dierker O F, Sylvan Grove
Finn, B F, Cedar Vale
Foltz J E, Hutchinson
Forbes D M. Selden
Graf J E Scottsville
Greening W P, Valley Center
Hall, George Baileyville
Halm C J, La Harpe
Ham W D, Beattie
Hazel, J A, Freeport.
Heylmun W R., Iola
Higginbotham T L Liberal
Janes G K, Williamsburg
Lash A R, Ellinwood.
Lilly C A, Atchison
Longenecker O M. Rosedale.
McCord F E, Milford.
McDonald W S, Ft. Scott.
McNaughton W L., Elgin.
Meyer A A, Alma
Neighbors C A. Emporia
Richmond, Thomas Kansas City
Schwartz C W Topeka
Scoles J P, Galena.
Silverthorne, C R., McFarland
Simmons C L., Westphalia
Sloan J R Stanley
Thacher M S, Turon
Troutman, John Kansas City

KENTUCKY

Bleiweiss M H, Louisville.
Combs W G, Winchester
Coomer R C, Speedwell
Coomes M F Louisville.
Crabtree R F, Gamaliel
Doherty W B Louisville
Edwards Fidelia, Edmonton
Escue B E Sharongrove.
Graveley W E, Brodhead
Green W O, Louisville.
Hammond L. F, Dunnville
Hendren G M, Buckeye.
Koger R G Powersburg
Lester C W, Guthrie
Menefee, C A, Napoleon
Paine, J R., Pembroke.
Parsons A. L., Louisville.
Shehan J N Maud.
Simpson V E Louisville
Smith B R, Clay City
Taylor H F, Mintonville
Warren Bradford Bee Lick
Windell J T Louisville
Witherspoon W H Harrodsburg
Yenowine G H Woddy

LOUISIANA.

Betts W R, New Orleans
Bodenheimer, J M. Shreveport
Brock J M, Mt. Herman
Franklin W T Orange
Harris C M Shreveport.
Jones W J Franklinton
Le Beuf, L. G, New Orleans
Lerch Otto New Orleans
Lewis O B Leesville
Newman A. J Hillsdale
Nichols, J W De Ridder
Perkins, W P Leesville
Pierce, W B Lake Providence
Price J A. Lockport.
Sholars, L. A., Opelousas
Selby J A, Shreveport
Tebo L C Reserve.

MAINE

Burker L. G Waterville.
Burrage T J Portland
Illes B G Jonesport
Philoon C E Auburn
Walker A. G Houlton

MARYLAND

Arthur H H Baltimore
Baldwin, Silas Baltimore.
Bare S L Westminster
Cannon T H Baltimore
Cassidy H F Baltimore
Cathell D W Baltimore
Dawson P M Baltimore
Franklin A. L. Cumberland.
Hughes S B Baltimore
Jones G W Laurel
Kerr Eugene Baltimore
Maisch A. C Hagerstown
Riggs G H Ijamsville
Spencer Ernest Bel Alton

MASSACHUSETTS

Campbell M P., Provincetown
Cliff L. A., Boston
Courtney J W., Boston
Dehn E W New Bedford
Dow J A. Cambridge
Fahey, J C, Northampton.
Finegan D J Gloucester
Fitzgerald, J J, Haverhill
Galligan E J, Taunton
Griffin, T M, Pittsfield.
Harriman, Cora E Framingham
Heath, J W, Wakefield.
Laurence J H, Brockton
Martin H C, Springfield.
Murphy, F P Lowell
O Connor J C Salem
O Keefe, D T, Boston
Roy J N, Webster
Sanborn J W, Roxbury
Slack, F H Boston
Tyler, W M, Lexington
White, C A., Whatley

MICHIGAN

Burwell, A. G Byron Center
Clark, J E, Detroit.
Connor, G L, Detroit.
Gibson J C, New Haven
Hagerty, H A Detroit.
Hardy, P B, Tecumseh.
Ives A. W Detroit.
Levin Simon Lake Linden
Lunn Wm B, Marquette.
Martin E G Detroit
McGarvah J A Detroit.
McGillicuddy, James, Shepardsville.
Mooney E W, Detroit.
Moore, G E, Ironwood.
Paradis R. A., Bessemer
Parker I E, Dryden
Pray G R Jackson.
Pullen C D, Mt. Pleasant.
Rainie Frank Manistique
Roberts M. D, Hancock
Scott, A. H, St. Joseph.
Sprague W B Palmyra
Thomas, O J West Branch.
Wilkinson, C A, Kendall
Young R K., Detroit.
Zimmer L. L Detroit.

MINNESOTA.

Arey H C., Excelsior
Clark C N St. Charles.
Davis F W, Kasson.
Durgin, F L Winnebago
Long Jesse Minneapolis
Mallory J N Emily
Meckstroth, C. W Brandon
McMasters, J M Sauk Center
Mellby O F., Argyle
Moore J T, Minneapolis
Neumann W H Lewiston.
O Brien H J St Paul.
Olsen S H Melaca.
Orton, H N, Minneapolis.
Power F W, Barrett.
Ransom M L. Hancock
Savage F J St. Paul
Seashore D E West Duluth
Storch C M Grand Rapids.
Williams U G Minneapolis
Woods E A. Clear Lake.

MISSISSIPPI

Bucey J I, Longtown
Curry R. S Columbus
Dampeer J M Crystal Springs.
Goodman R. L., New Albany
Hamilton H L Money
Heald, R. J Healds.
Kittrell J R, Laurel
Mayes H N New Albany
McCarty J F, McHenry
Miller H R Lamont.
Newman A J, Bowling Green
Scales W F Macon.
Sharp J Sidney Grenada
Smith J D, Sandersville.

MISSOURI

Albers E A. Smithton
Bailey W S, Leeper
Baldwin Paul Kennett.
Batdorf F P Farmersville
Bauman L. C, St Joseph
Beers E G Springfield.
Bell J M St. Joseph
Billeter W J Bynumville
Brady J M, St. Louis
Burney W S., Miller
Clark, H R., Pierce City
Crockett J A Stanberry
Culp J C Thayer
Cummings, C C Joplin
Cuppaidge, G O, Moberly
Crane T V B Springfield.
Davis J D Louisiana
Davis, R H St. Louis
Dorsett E L, St. Louis
Douglass W H Columbia.
Gaines E F Bates City
Geeslin P A Luray
Gilmore E F Adrian
Goodwin E J St Louis
Hutton W S, Fernfelt.
Justice W F Lancaster
Kirkpatrick, H E, Dalton

Krimminger C E, Independence
Langan, W J St. Louis
Loer, T R., Billings
Lyle, H M. Kansas City
Major, H S, Harden
McIlure G W Carterville
McCoy, J H, St. Joseph.
McGaugh, E T, Richmond.
Mitchell D L., Cassville
Mollison, J A., Bolckow
Mook, W H St. Louis
Morris W C, Kansas City
Myers W T, Aldrich
Newman, L. E, St. Louis
Painter, J M, Mt Vernon
Pare E Y, Leeton
Pittman, W T Spickard
Popejoy H R High Point
Reynolds, J B, St. Joseph.
Rienhoff Wm, Springfield.
Robertson, J A, Ozark
Robertson, W A Allendale
Semple N M, St. Louis
Sherer J W Kansas City
Sluder, Greenfield St. Louis
Smith C W, Keota
Temple, C H. Rockford
Toothaker B W, St. Joseph.
Walker, G W Cape Girardeau
Weems D L Neosho
Williamson, Llewellyn St. Louis.
Wingo T B, Dexter
Yeagle, R. P Pleasant Hill

MONTANA

Atkinson, J L., Poplar
Brewer A. D Belgrade
Hathaway, R. E. Glendive.
Leard, S E. Livingston.
Sullivan, T J, Butte.

NEBRASKA.

Calkins, F E., Fremont.
Hawthorne, R A., Maywood
Houser, M. A, Arapahoe.
Loomis M M., Omaha.
Muirhead, A. L. Omaha
Murdoch, R J Blair
Pierce, R. P, Ruskin
Schultz H H, Sutton
Stokes, A C. Omaha.
Zoll, F C, Marquette.

NEVADA.

Gregory, E. B Reno

NEW HAMPSHIRE

Aldrich L C Jefferson
Carleton, E H. Hanover
Clarke, G H, Concord

NEW JERSEY

Atherton A. L, Atlantic City
Campbell, W K., Long Branch
Cory H. C, Newark.
Kuehne, Richard, Jersey City
Ridgway, W F, Atlantic City

NEW MEXICO

Wilson, W A., Willard.

NEW YORK.

Ackert, W S, Poughkeepsie
Andrews, H I, Ithaca
Armstrong, D F Auburn.
Bang, R. Y New York
Barron W E, Addison.
Bartlett, W A., New York.
Beer Edwin, New York.
Blodgett, F J, New York.
Bodine, J A., New York.
Brewer, F H, Utica.
Brown W B New York
Caldwell, E W, New York
Carr M. L, New York
Chase, W B Brooklyn
Conklin W L, Dansville.
Comman L. R., Rochester
Crim, F D Utica
Davis A, T Utica
Dederick A. S Troy
Drayton H S New York
Dowd C N New York
Farrell B P New York.
Fay A. S Schenectady
Fitzgerald C F New York
Fodder W L, Schenectady
Frankl Julius, Annmoosa
Freeman R G, New York
Glass J H, Utica
Goddard W W Schenectady
Goodman, H L, New York
Goodridge, Malcolm New York
Gromann John, Utica
Hale H E, Jr New York
Hart, T S, New York.
Hubby L. M New York.
Johnson J R. Syracuse.
Keough M J., Cohoes
Kysor L. M., Hornell
Lange C F New York
Lawrey Nicholas Brooklyn
Leadley F P, Rochester
MacFarlane A. Albany
MacPhee J J, New York.
Maurer, G E New York.
McBarron J D New York
Miller F E, New York.
Mittelstaedt G B J, New York.
Mogill, J W, Rochester
Norton, N R New York
Peckham A. L Poughkeepsie
Perry E C, Avon
Robinson A. L. New York
Rosenberg, Max, New York.
Seibert August, New York
Stearns, H S, New York
Stone W S New York.
Sumner, C W, North Granville.
Taylor F L New York
Taylor, H C, New York.
Townsend T M New York
Travis A H, New York.
Ullman G L, Albany
Volkenberg Albert, New York
Williams, W R. New York.
Winne, C K Jr, Albany

NORTH CAROLINA.

Bulluck, D M Wilmington
Highsmith Seavey Fayetteville.
MacKeathan, J A., Fayetteville
Teague R J Durham
Wood, E J Wilmington

NORTH DAKOTA

Greene Lee Bey, Monango

OHIO

Emerson H H Gratis.
Fiser J H Malinta.
Fitton, F M. Hamilton
Hoover D E Warren.
Hugg A. A Middleport
Pennock, Frank, Marlboro
Wiltshire J M, Chillicothe

OKLAHOMA

Boyle G A., Enid.
Lewis A R., Ryan
Logan W A., Lehigh
Rolster J B, Oklahoma City

OREGON

Jones N W., Portland.

PENNSYLVANIA

Arnold C. A., Allegheny
Baldwin H L., Tioga
Beardsley, E J G Philadelphia
Birchard, F S, Montrose.
Bitzer N E, Lancaster
Boyle P F., South Bethlehem
Buterbaugh H B, Indiana.
Da Costa John C Jr, Phila.
Dasher J H, Erie.
Duff R H., Girard.
Duncan H A. Philadelphia
Fisler H C., Easton
Gayley, W C, Hazleton
Henderson, W B Philipsburg
Hermann M E Dushore.
Hines E P Great Bend.
Houghton, C. W Philadelphia
Hunter, W R, Erie
Kelly J A., Carbondale
Ludlum S D., Merion Station
McKee, F L., Plymouth.
Miller, C D Pottsville
Reynolds C B Philadelphia
Richards E W Easton
Roxby J B Swarthmore.
Schlindwein G W Erie
Stalberg Samuel Philadelphia
Smith, H B Philadelphia.
Smith L. H, Hazleton
Stewart T S Philadelphia.
Swan T E, Easton
Swayne Eugene, Philadelphia
Wagner E E. Wilkes Barre.

RHODE ISLAND

Pierce E E. Providence

SOUTH CAROLINA.

Dendy W R Pelzer
Jenkins E O, Troy

SOUTH DAKOTA.

Burnside, I M. Highmore
Collisi N, Vermillion
Denman Homer DeSmet
Egan M H, Sioux Falls
Wicherski O G, Frankfort.

TENNESSEE

Brush C D, Nashville
Cock W S, Bolivar
De Witt Paul Nashville.
Duckworth W C Jackson
Fleenor C W Holston Valley
Newman N R Covington.

TEXAS

Adams, G E Fort Worth
Allison, Hendery, W T
Darnell C F Llano
Domingues P J Kerrville
Furman J M., Ft Worth
Gill J M. F, Temple
Goher J M Beaumont.
Goldblum Jacob, San Antonio
Gordan J B Stephenville
Hodges O S Beaumont.
Hooper, P L. Fort Worth
Hull C F Carthage
Jackson, T T, San Antonio
Kemp Joseph Walnut Springs
Link H R Palestine
Livingston D S Llano
Maples L. E Morgan
Martin B Z Leggett.
McCarver J W Brownwood.
Means E A, Dallas
Miller R A Dublin
Morris H C Brownwood
Morris S M, Galveston.
Rhu Hermann S, Llano
Rowley Frances Galveston.
Rulfs C H, Nacogdoches
Russell W E Duffan
Smith P S Chalk Mountain
Stafford, P H, Grapeland.
Wallace C H Cookville.
Warwick H L Fort Worth
Woodard F C Grapeland
Worthington G W Lovelady
York J B Houston

VERMONT

Marvin David, Essex Junction.

VIRGINIA.

Chiles J H, Pulaski
Myers G T., Norfolk.
Rawls J E Suffolk
Trout H H, Staunton.

WASHINGTON

Adams O L, Sprague
Easton C E Seattle.
Teepell, Wm McMurray

WEST VIRGINIA.

Benton G H Chester
Pifer J L, Buckhannon
Stephan D E Fairmont
Thornton J T Wheeling

WISCONSIN

Andrus A P Ashland
Abraham, H W Appleton.
Baker C. D, Glen Haven
Callahan J L, La Crosse.
Davies, R E Waukesha
Hackett J H, Milwaukee
Kinney R H, Lancaster
McFarland, W E Trempeleau
Minahan, W E Fond du Lac.
Rice E M Kewaunee.
Roy, Emile, Fond du Lac.
School, J G Oshkosh
Stormont C J, Viola
Westphal H G, Polar

WYOMING

Burgess, W A., Cheynne

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION Atlantic City June 4-7

Oklahoma State Medical Association Shawnee May 14 15
North Dakota State Medical Association, Minot May 14 15
Louisiana State Medical Society New Orleans May 14-16
Missouri State Medical Association Jefferson City, May 14 16
Arkansas Medical Society Little Rock, May 15 17
Iowa State Medical Society Cedar Rapids May 15-17
Maine Med. Assn Lewiston June 12 14 (changed from June 5 7)
Michigan State Medical Society Saginaw May 15-16
Montana State Medical Association Billings May 15-16
New Hampshire Medical Society Concord May 16-17
West Virginia State Medical Association Huntington, May 15 17
Illinois State Medical Society Rockford May 21 23
Connecticut State Medical Society Hartford May 22 23
Indiana State Medical Association Indianapolis May 22 24
Arizona Medical Association Bisbee May 28 29
South Dakota State Medical Association Sioux Falls May 28-30
Amer Laryn Rhin and Otol Society New York May 30-June 1
American Academy of Medicine, Atlantic City N J June 1-3
American Association of Medical Examiners Atlantic City, June 3
American Gastro Enterological Association Atlantic City, June 3-4
American Proctologic Society, Atlantic City, June 3-4
American Urological Association Atlantic City, June 3-4

NEW YORK ACADEMY OF MEDICINE

Regular Meeting of the Section on Surgery, held April 5, 1907

DR JOHN F ERDMANN, in the Chair

Operation for Habitual Dislocation of Patella

DR. WILLIAM C LUSK presented a man, 41 years old, who, six years previous, while running slipped on some ice and fell over backward, dislocating both his patellæ outward After ward, always on flexion of the legs, the patellæ slipped out ward over the external condyles The right knee was operated on by modification of Krogius' method Krogius divided the aponeurotic structures down to the capsule of the joint along the outer side of the patella, and the iliotibial band above, to relieve the shortened tissues on the outside of the joint Then making a musculo aponeurotic flap on the inner side of the joint without entering the joint on this side either, he carried this flap in front of the quadriceps extensor tendon around the upper border of the patella and laid the extremity of it in the wound which had been made in the aponeurotic structures at the outer side of the joint, and sewed it there. Then the edges of the wound at the inner side of the joint, made by the removal of the musculo aponeurotic flap, were sutured together, thus shortening to this extent the tis sues at the inner side of the patella, by the support tendency to outward dislocation would [illegible] he incision at the outer [illegible] rd through the muscle

fibers of the vastus externus to the outer edge of the quadriceps extensor tendon Finding furthermore, that by Krogius' method only the tip of the musculo aponeurotic flap would reach into the wound in the divided structures at the outer side of the joint, instead of carrying this flap in front of the quadriceps extensor tendon, he made a blunt dissection beneath the tendon above the subquadricipital bursa and carried the flap through the opening thus made and then laid it in the musculo aponeurotic wound at the outer side of the knee-joint, which was found to fit accurately from its upper limit down to within half an inch of its lower end The flap was sutured in place with chromic gut Operation was performed on January 14 On March 12 the patient gave up the use of his cane On April 5 he had voluntary flexion of the right leg to 90° and forced flexion of about another 10°

Fracture of the Patella.

DR. CLARENCE A MCWILLIAMS presented a man who fell and fractured his patella in five or six places He prefers the transverse rather than the vertical incision, because it allows the lateral tears in the vasti expansion to be sutured. Three loose pieces of bone were removed, and a purse-string suture was placed around the remaining fragments The man made a good recovery

DISCUSSION

DR HOWARD LILIENTHAL said that in the ordinary transverse fractures of the patella he has been in the habit of using the massage treatment. In this non operative treatment the patient was out of bed, but in splints, on the eighth day, and a cure is accomplished on the forty eighth day King Edward's fractured patella was not sutured and yet good results were obtained In cases of comminuted fracture, however, operation is proper

DR. JOHN M. ERDMANN asked Dr Lilienthal what he does to bring the fragments together in this massage treatment.

DR LILIENTHAL replied that he first places an arrangement of tapes above and below the patella, strapping the fragments together, and an ordinary bandage is then applied During massage however, everything is removed and the fragments are held in place by an assistant Massage is given for fifteen minutes morning and night By the eighth day it is supposed that adhesions have taken place which will hold the fragments together, and then the patient is permitted to get up, but with the splints on.

Drainage in Operations on the Biliary System

DR. HOWARD LILIENTHAL summed up the vital points as follows (1) That the scientific and judicious employment of preliminary drainage in obstructive jaundice would probably lessen the dangers of such steps as might be necessary for permanent cure. (2) That the drainage should form the sole object of the surgeon's work until the factor of cholemia had become eliminated (3) That radical operations should, in most chronic cases be postponed until hepatic engorgement and icterus no longer existed

DR. A V MOSCHCOWITZ said he has never been a believer in hepatic drainage. In all cases requiring drainage, if the common duct is not free, no operation is complete until the duct is made free, if it is free, there is then sufficient drainage into the intestine

DR LILIENTHAL emphasized the importance of draining the liver through the gall bladder by a slow method.

New Operation for Cystocele in Women

DR. J RIDDLE GOFFE'S plan is to dissect away the bladder, freeing it entirely from all structures, except those above He then rotates this viscus on its transverse axis, carries it up and stitches it to the uterus The work is all done per vaginam He has had from 50 to 60 cases under observation and he had not learned of a recurrence.

Surgical Anatomy of the Esophagus

DR. CHAS R L PUTNAM showed how the caliber of the esophagus differs in various parts He said that the least distensible places were at the beginning and at a point behind the summit of the aortic arch This point might be pressed on by aneurism of the arch and, therefore, constrictions in this region should have history and physical signs most carefully studied. These narrowings, as shown by the casts, have a surgical significance They determine the points at which ingested caustic solutions are most apt to be the cause of ulceration and stricture, they might cause an arrest of foreign bodies, where the narrowing in the esophagus is due partly to relations to other organs, changes in the latter might increase the degree of narrowing to the extent of producing a clinical stricture

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MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

One Hundred and Ninth Annual Meeting, held in Baltimore, April 22 25, 1907

The President, DR HIRAM WOODS, of Baltimore, in the Chair

Officers Elected

The following officers were elected for the ensuing year President, Dr Charles O'Donovan, of Baltimore, vice presidents, Drs Roger Brooke, of Montgomery County, and H. A Naylor and George W Doblin, of Baltimore, secretary, Dr John Ruhräh, treasurer, Dr William S Gardner, members of council, Drs Hiram Woods, St. Clair Spruill, Howard Bratton, Lewellys F Barker, State Board of Medical Examiners, Drs L A Griffith and J A Stevens, Committee on Library, Drs J Whitridge Williams, Harry Adler, H Barton Jacobs, Mary Sherwood, T B Futcher, Committee on Legislation, Drs John D Blake, Herbert Harlan, W W Goldsborough, delegate to American Medical Association, Dr Harry Friedenwald, alternate, Dr G Milton Linthicum

As the result of the organization of the society, there are now 900 members The library, which formed the principal topic of discussion at the meeting, contains over 10 000 volumes, so that its present quarters are entirely inadequate A canvass is being made to secure, from the profession and citizens of the state, a fund to purchase suitable grounds and to erect a $100,000 building

Domination of Therapeutics by Commercialism

The annual oration was delivered by DR. GEORGE H SIMMONS, Chicago, his subject being "The Commercial Domination of Therapeutics and the Movement for Reform" The paper will appear in full in THE JOURNAL

The Medical and Chirurgical Faculty, Its Debt to Itself and the Public

DR. HIRAM WOODS, Baltimore, in summing up his presidential address, said that the society's debt to itself is steady work in component branches to develop their own force "Self reliance is the foundation of progress, but it is to be distinguished from self complacency One's own limitations should be recognized and help sought if it will be useful We should develop the spirit of cooperation Misunderstanding saps strength Criticism, based on inadequate information, is inconsistent with ordinary fairness Knowledge can always be obtained by inquiry

"Our teachers should promote medical organization by instilling into students proper conceptions of their position as members elect of an honorable profession, and should help young men to apply principles of medical honor to student life Much worthless and unworthy material will thus be eliminated By graduation time students should know about the State Faculty and how it can help them The duty of improving the tone of our profession and eliminating quackery lies at the door of the individual Legal machinery is adequate, enforcing spirit must come from us We must develop work among our younger men and make them active factors in the Faculty's life. This should be done through establishing new lines of public usefulness and the study of medico social questions

"To the public we owe something more than knowledge of disease We should take the position of public educators in matters affecting public good and physical well being We should secure better relations with the press by giving it, for deliverance to the public, something worth knowing Legislators should not be left to find information on medical matters

where they can get it, but we should take it to them and use our influence as a united body All this, at least in my opinion, is only the logical sequence of medical organization It is antagonized by traditional interpretation of medical ethics, to a greater or less degree But we are living under a new code which puts ethical responsibility on individual honor rather than on arbitrary rules This must be the basis of medical organization, for if the factors are faulty the whole will be useless"

The Logical Basis of Neurasthenia.

DR. A. KERR BOND said that "all nerve response is dual, with every nerve impulse is associated its limiting impulse When nerve force is called into activity, there is evoked likewise its control to restrain it within its proper bounds of area and intensity and duration With the wakening of any nerve force there is a simultaneous wakening of a definite accompanying force designed to control it With the neurasthenic we have to deal not only with the cells too fatigued or weak for active impulse, but possibly with cells too fatigued or weak for the twin impulse to restrain In America we do things to excess in every line of work In that respect we are a race of neurasthenics"

"Patent" and Proprietary Medicines

DR LOUIS B HENKEL, JR, of Annapolis, spoke of cocain in nervines, in salves and plasters, of arsenic in skin disease remedies, of iodin in rhematism remedies, of opium in soothing syrups, of nostrums containing nitroglycerin, of stomachic and digestion remedies containing alcohol, of headache remedies causing weak heart, of hair dyes and bleaches injuring the hair and producing baldness

Indications for Operation in Chronic Suppurative Otitis Media

DR. H. O REIK explained the pathology of this disease and referred to the various methods of treatment, according to the conditions encountered in different cases The prognosis of chronic suppurative otitis media was stated to be good if proper methods of treatment were employed, and he expressed the belief that if due care was exercised in diagnosticating the factors accountable for chronicity in each case and conscientious efforts made to remove or overcome them that only a small minority of even the most chronic otorrheas would require the so called radical operation. He believed that this operation should properly be held in reserve as a last resort for those cases which do not succumb to milder forms of treatment or simpler surgical measures He offered the following rules for guidance when considering the treatment of persistent chronic suppurative otitis media 1 Broadly speaking, practically every case of suppurative otitis media is assumed to be susceptible of cure by one means or another 2 Every case of chronic suppurative otitis media, without symptoms of intracranial invasion, should be treated patiently and persistently for a reasonable length of time, *but not indefinitely*, by well directed efforts at cleanliness and antisepsis through the external auditory canal When it becomes evident that these simple measures or minor operations can not cure the disease, tympano mastoid exenteration should be advised, unless in a given case there exists some special reason to justify delay and the risks of the disease 3 The possible dangers of the operation are believed to be far less than those of the disease 4 The patient should be told that not every case is curable, even by an operation (the percentage of cures in the obstinately chronic cases probably approximating 70 per cent), that the hearing power will probably not be improved and may be somewhat impaired, but that the serious nature of his disease warrants surgical intervention as a prophylactic measure

Erysipelatous Cellulitis.

DR. HARRY FRIEDENWALD reported a case of erysipelatous cellulitis of the eyelids in a child, 2 years of age Threatened gangrene is believed to have been averted and high fever (104°) was promptly reduced by the use of antistreptococcus serum.

The Present Status of Vaginal Cesarean Section.

DR. L. M. ALLEN drew the [illegible] ons That vaginal Cesarean section has a [illegible] field of operative obstetrics, but that its indications are limited to those cases where the cervix is not dilated by gentle means, and the pregnancy not advanced beyond the thirty-fourth week. That experience and a careful study of the cervix will demonstrate the fact that it is dilatable by gentler means much more frequently than is ordinarily believed, and if this method be persisted in more radical measures will not be so often necessary That we should not allow the desire to perform this much talked of operation to overbalance our better judgment, and that certainly for the average man more conservative obstetrical operations will be attended by better results than the more radical ones

Appendicitis

DR RANDOLPH WINSLOW reported a case of appendicitis in which the symptoms were so mild that he left the result to Nature Some days later, while the patient seemed to be convalescing satisfactorily, gangrene set in in the leg and extended up to the knee The limb was amputated and the patient made a good recovery

A joint meeting of the society with the Maryland State Conference of Charities and the Maryland State Federation of Women's Clubs was held on the afternoon of April 25 The principal address was made by Dr Prince A Morrow, of New York City, on "The Prophylaxis of Social Diseases" Others who addressed a crowded mixed audience on these affections were Dr Lillian Welsh, Dr Charles P Emerson, Dr Flora Pollack, Dr Howard A Kelly and Assistant Commonwealth Attorney Eugene O'Dunne At the conclusion of this discussion, which created a marked interest, a motion was adopted to organize a Baltimore branch of the American Society of Sanitary and Moral Prophylaxis, and a committee was appointed to carry this motion into execution

Many other interesting papers were read

SOUTH CAROLINA MEDICAL ASSOCIATION

Fifty-ninth Annual Meeting, held in Bennettsville, April 16 18, 1907

The President, DR. T PRIOLEAU WHALEY, in the Chair

Since the adoption, two years ago, of the plan of organization suggested by the American Medical Association, the South Carolina Medical Association has increased in membership from 300 to 735, It is estimated that about 1,100 physicians are in active practice in the state, and earnest efforts are being made, with every hope of success, to bring the majority of those now unaffiliated into the fold

Officers Elected

The election of officers for the year resulted as follows President, Dr Legrand Guerry, Columbia, vice presidents, Drs R A Marsh, Edgefield, J A. Hayne, Greenville, Mary R. Baker, Columbia, secretary, Dr Walter Cheyne, Sumter, treasurer, Dr C P Aimar, Charleston

The next meeting will be held in Anderson, April 15 18, 1908

Sexual Ignorance Versus Sexual Knowledge

DR WALTER CHEYNE, of Sumter, contended that the education of young girls and boys in the proper care of the sexual organs is the only hope for overcoming the disorders incident to certain diseases by preventing the spread of gonorrhea and syphilis It need not be considered immodest for the mother or father to instruct the child He recommends the insertion of chapters on sexual hygiene in school physiologies, but not to be studied in mixed classes, proper home instruction, father to son, mother to daughter, greater efforts of the physician for the dissemination of sexual knowledge and its importance among the laity He also advocated the compulsory examination and legal quarantine of diseased prostitutes

DISCUSSION

DR. [illegible]PPELL thought a marriage license law, requiring [illegible]nation of the [illegible]licant for license, should be [illegible] no [illegible] [illegible]age license in South [illegible]la

DR. ROBERT WILSON thought the registration and segregation of prostitutes might tend to increase immoral practices by holding out a guarantee of immunity from disease, of which there could be no certainty He also called attention to the fact that the discussion of sexual matters excite certain natures, and advised extreme caution and tact among physicians and parents in carrying out Dr Cheyne's idea

The County Society

DR. J W JERVEY, of Greenville, urged on the members the importance of exercising their political influence in matters pertaining to the practice of medicine and the health of the state. He expressed the conviction that the recent defeat of certain candidates for governor and attorney general was due, in large measure, to their attitude in the general assembly toward matters of legislation suggested by the state association Certain newspapers of the state misunderstood this reference to politics and warmly scored Dr Jervey and the profession for political tendencies Other papers took a broader view of the question and commended the views expressed The publication of a card of explanation by Dr Jervey has reversed the attitude of the unfavorable press, and the notoriety given the matter among laymen will undoubtedly strengthen the hands of the medical fraternity in their future efforts for favorable legislation.

Other Papers Read.

The following papers were also read

'Gallstone Disease' by Dr John B Deaver Philadelphia Kidney Surgery,' by Dr C H Chetwood, New York A Demonstration of Zinc-Mercury Ionization Methods for Treatment of Cancer and Surgical Tuberculosis by Dr G Betton Massey Philadelphia The Effect of Eyestrain on the General Health by Dr Charles W Kollock Charleston Suprapubic Lithotomy Removal of Stone and Hair Pin from the Bladder by Dr D M Crosson, Leesville Report of Interesting Case of Hæmatocele of Long Standing, by Dr S C. Baker Sumter Intestinal Parasites The Importance of Routine Examination of the Feces, by Dr J C Sosnowski Charleston, 'Cancer of the Uterus, by Dr A B Knowlton Columbia 'The Pharyngeal Lymphatic Ring by Dr E W Carpenter, Greenville General Paralysis by Dr J J Watson Columbia Responsibility of the Physician in Cases of Carcinoma of the Cervix and of the Breast by Dr LeGrand Guerry, Columbia Arteriosclerosis of the Uterine and Pelvic Blood Vessels, with Symptoms of Cancer of the Uterus' by Dr Charles M Rees Charleston Typhoid Fever Symptoms and Treatment, by Dr William A. Woodruff Catecchee, The Origin of Disease, by Dr Fillmore Moore Aiken, Some Reasons Why the Medical Profession Should be Better Paid for its Services' by Dr H R Black Spartanburg 'Encephalocele with Report of Case, by Dr H L. Shaw Fountain Inn, Some Experience with Hyoscin Hydrobromid by Dr G A Neuffer, Abbeville Regarding the Action of Certain Familiar Drugs by Dr John Forrest, Charleston The Successful Treatment of Apparently Hopeless Blindness A Preliminary Report by Dr W Peyre Porcher Charleston Infant Feeding,' by Dr W P Cornell Charleston

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MEDICAL ASSOCIATION OF GEORGIA

Fifty eighth Annual Session, held at Savannah, April 17 19, 1907

(Concluded from page 1545)

Methylene Blue in the Treatment of Cancer

DR. HENRY R SLACK, La Grange, said that ten years ago he read a paper on this subject, which was published in THE JOURNAL, June 27, 1897 In this paper he reported 5 cases, and has since treated 29, but gave only 3, as they are fairly representative He has selected these 3 cases not because they have given the most brilliant results, but because of their peculiar interest Case 1 had been pronounced an inoperable carcinoma of the breast over four years ago had yielded for a time to Roentgen rays, but after several burns tolerance was established and the disease spread, causing much pain and destroying health On administering and applying the methylene blue, the disease again yielded, and the patient is now enjoying fairly good health and is free from pain Case 2 was an epithelioma of the left lower lid, which was benefited by Roentgen rays, but the patient did not get well until the methylene blue was used Case 3 was one of carcinoma of the uterus following laceration of the cervix, which is being arrested by administration of methylene blue alone

Of the 29 patients treated with Roentgen ray or combined with methylthionin hydrochlorid, 12 have been dismissed as cured, and 5 have gone over three years without recurrence. The other seven, ranging from five to thirty months since dismissal, shows no evidence of return There are 9 still under observation, 7 of whom are doing fairly well, as the disease is in abeyance They suffer very little, and are able to attend to their usual duties Of the 12 patients cured, 8 had epitheliomas, 3 carcinomas and 1 a sarcoma

His experience with the methylthionin hydrochlorid teaches him to expect the following results 1 Everything with which it comes in contact is stained a deep blue, the urine soon looks like blue ink, and the practitioner should always tell the patient to expect this 2 There is surcease from pain 3 The general health of the patient is improved and years are added to his life

Cough and Its Treatment in Tuberculosis

DR. M M SALIBA, Savannah, said that in most cases of tuberculosis the cough is due to irritation of the large air tubes, notably the larynx or at the bifurcation of the trachea, and it is usually associated with more or less catarrh This kind of irritable cough is best treated with inhalations, dry or moist The moist inhalations consist of steam, impregnated or not with some balsamic or stimulating aromatic substances, or with some more sedative drug The dry inhalations are more efficacious and are certainly more convenient When an asthmatic tendency is associated with phthisis, opium or stramonium cigarettes will, perhaps, be found the best remedy for the night cough When the cough depends on laryngeal disease, the remedies chosen will be determined to a great extent by the conditions of the larynx, and it may be necessary to apply some sedatives, i e, cocain and morphin, directly with a brush A simple means of allaying the cough of laryngeal irritation is sipping iced water When the cough is due to irritation or hypersensitiveness of the pharynx, combined with laryngeal irritability, a good plan is first to wash away the catarrhal secretion by a warm borax gargle, and then brush the mucous membrane of the pharynx and larynx with a sedative solution

Fracture of Femur

DR JABEZ JONES, Savannah, exhibited an apparatus for the treatment of fractured femur In the operation of wiring a fractured femur he emphasized two points, the first of which is never make an incision until the limb has been rendered bloodless Hemorrhage is very alarming when a tourniquet is not used Second, never operate unless assured of as nearly perfect asepsis as surgery gives to day

Aneurismorrhaphy

DR CRAIG BARTOW Savannah, in the past three years has operated on 4 cases, successfully performing two reconstructive endo aneurismorrhaphies, one obliterative and failing in another

Multiple Abscess of Pelvis

DR E C DAVIS, Atlanta, said the proper handling of suppurating conditions is one of the most difficult of all surgical problems, and one which taxes the ingenuity and skill to the highest possible degree, when we add to this the liberation of numerous adhesions and devitalization of tissues to such an extent that sloughing ensues, there was materially added to the difficulties of the problem the dangers of the operative procedures The case he reported accentuated these difficulties markedly It illustrated several points which he sums up as follows 1 Is there any correlation between chronic pelvic suppuration and glycosuria? 2 Nature may cast off a large piece of intestine and recovery ensues 3 Nature endeavors to make an anastomosis, pointing out what the surgeon ought to do 4 The utilization of suture material in place of mechanical devices to approximate the ends of intestine Since this report was contemplated, the author has resected the large and small intestines, using the same suture, with perfectly satisfactory results and no leakage

Suprapubic Prostatectomy

DR E R CORSON Savannah, summarized his paper as follows The suprapubic route is preferable in the majority of cases The operation is simpler, can be done more quickly,

cuts fewer tissues, with much less chance of injuring the rectum or prostatic urethra, and with it the sexual function This route is even better when the patient's condition demands two stages for the operation He believes the profession is gradually coming to view the suprapubic route as the better of the two in the majority of cases

Surgical Anesthesia.

Dr J M Sigman, Savannah, said that no patient should ever be allowed to leave the operating table before being given a stimulant if there is the slightest indication for it. There are more fatalities from neglecting a weak heart in the first two hours after an operation than ever occur while the patient is under anesthesia A safe anesthetic is dangerous in incompetent hands A dangerous anesthetic can be given safely by an experienced, competent man. The author thinks that more will depend in many cases on the work of the anesthetist as regards the ultimate recovery of the patient than on the surgeon Nurses and undergraduates should not be entrusted with a general anesthetic. The anesthetist should be held accountable for the patient's condition while on the table, and to do this legally he must be a licensed physician All surgeons know that a good anesthetist is almost indispensable, yet there is no class of work given so little encouragement, and few men are willing to follow this line until they become proficient with the first requirements of a good anesthetist

Rupture of the Uterus

Dr. A. P Hanie, Hartwell, reported a case of rupture of the uterus in which the fetus escaped into the abdominal cavity He operated, removed the fetus, and the patient recovered

Officers Elected.

The following officers were elected for the ensuing year President, Dr M A Clark, Macon, vice presidents, Drs Ralph M Thompson, Savannah, and E E. Murphy, Augusta, secretary treasurer, Dr Louis H Jones, Atlanta, delegates to American Medical Association, Drs George R. White, Savannah, and F H. Harris, Atlanta

Fitzgerald was selected as the place for holding the next meeting

Marriages

George Steurnagel, M D, to Mrs Jean L Haskell, both of Chicago, April 27

Francis C Duckwall, M D, to Miss Alice Brown, both of Scott, Ohio, April 24

James M Nealon, M.D, to Miss Margaret Roan, both of Plymouth, Pa, April 18

Edward W Banker, M.D, to Miss Lucile A Donaldson, both of Aurora, Ill., April 24

Robert H. P Ellis M.D, Baltimore, to Mrs Ida Van Bussum, at Belair, April 30

Alice Lilienthal, M.D, Brookline, Mass, and D Walther Hirshberg, of Boston, recently

Oliver J Gray, M.D, Wilmington, Del, to Miss Viola Anderson, of Folston, Md, April 17

Abel J Baker, M.D, Grand Rapids, Mich, to Miss Jeannette M Baer, of Portage, Mich, April 17

Gaylord Crawford Hall, M D to Miss Gertrude Dorothy Laib, both of Louisville, Ky, April 25

Philip Kingsworth Gilman, M.D Baltimore, to Mrs Ellen Cary Burbank, at Wilmington, Del, March 2.

Thomas Joseph Gilmore, M.D Williamsport, Pa, to Miss Mary Lyle Sloan, of Orangeville, Pa, April 20

William Dick Campbell, M.D., Hagerstown, Md to Miss Marie Louise Parsons, at Piedmont, W Va, April 24

Paul R Oeser, M.D, Lawrence, Mass, to Miss Grace David son of New London, Conn, in New York City, April 30

David Cushman Twichell, M D, Saranac Lake N Y to Miss Ella Goodridge Cooke, at Green Spring Valley, Md May 2

Edwin E Straw, M D, Marshfield, Ore, to Miss Sarah C Lakeman, of Mountain View, at Santa Rosa, Cal, April 19

Deaths

George W Smith, M.D University of Pennsylvania Department of Medicine, Philadelphia, 1863, a member of the Medical Society of the State of Pennsylvania and for many years president of the Blair County Medical Society, assistant surgeon of the Fifty fourth Pennsylvania Volunteer Infantry during the Civil War, for more than twenty years United States pension examining surgeon, for many years a member and for ten years president of the Hollidaysburg Board of Health, physician to the Blair County almshouse and Blair County jail, died at his home in Hollidaysburg, April 22, from cerebral hemorrhage, after an invalidism of about five years, aged 72

Charles Griffith Worthington MacGill, M.D University of Maryland School of Medicine, Baltimore, 1856, a member of the American Medical Association, surgeon of the Second Virginia Infantry, C S A, for more than thirty years a member of the board of visitors of the Maryland Hospital for the Insane Catonsville, once a member of the board of school commissioners of Baltimore County, vice president of the Medical and Chirurgical Society of Maryland, and president of the First National Bank of Catonsville, died at his home in that place, April 28, from heart disease, aged 73

Wilson Cary Nicholas Randolph, M.D University of Virginia Department of Medicine, Charlottesville, 1855, a grandson of Governor Randolph of Virginia and a great grandson of Thomas Jefferson, surgeon in the Confederate service during the Civil War for 17 years a member of the board of visitors of the University of Virginia, and for eight years rector of the university, died at his home in Charlottesville, April 26, from pleurisy, after an illness of three days, aged 73

Flavius J Taylor, M.D Kentucky School of Medicine Louisville, 1865 a member of the Kentucky State Medical Association and secretary of the Barron County Medical Society, formerly a member of the city council, editor of the Glasgow *Republican* secretary of the board of pension examiners, assistant surgeon in the United States Army during the Civil War, died at his home in Glasgow, April 21, from cerebral hemorrhage, after a long illness, aged 70

William G McFadden, M.D Jefferson Medical College, Philadelphia, 1870, surgeon of the Seventy ninth Indiana Volunteer Infantry, and later brigade surgeon of the First Brigade, Third Division Twenty first Army Corps, captured at Chickamauga and imprisoned in Libby prison, Richmond for three months, after the Civil War a practitioner of Shelbyville, Ind, died in Daytona, Fla, from heart disease April 20, aged 73

George Nichols, M.D Vermont Medical College, Woodstock 1851 surgeon of the Thirteenth Vermont Volunteer Infantry in the Civil War, state librarian of Vermont from 1848 to 1853, secretary of state of Vermont from 1865 for several years president of the Northfield National Bank, died April 27, at his home in Northfield, Vt, from nephritis, aged 79

Edwin M Shaw M D Medical College of Ohio, Medical Department of the University of Cincinnati, 1885 a member of the State Medical Association of Texas and the Victoria County Medical Society, died at his home in Victoria January 1 from angina pectoris and hemorrhage of the lungs, after an illness of three days, aged 49

Thomas Withers Dresser, M D New York University Medical School, New York City 1864, surgeon in the Confederate service during the Civil War and for 40 years a practitioner of Springfield Ill died at the home of his daughter in East St Louis Ill April 27, from pneumonia, after an illness of nine days, aged 70

Andrew Thomas Dunn M.D University of Buffalo (N Y) Medical Department, 1863 Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons, Kingston Ont 1864, died at his home in North Augusta Ont January 16, after an illness of four or five years, at an advanced age

F W Bernhard von Buest, M.D University of Leipzig Germany during the Civil War brigade surgeon on the staff of Gen Burnside and Gen Gordon some time member of the New Albany (Ind) board of health, died at his home in New Albany Ind, from exhaustion due to chronic diarrhea, April 3, aged 76

Winthrop Butler, M.D Medical School of Harvard University Boston, 1876 assistant surgeon in the United States Navy during the Civil War a member of the Massachusetts [illegible] ty and the Bristol South District Medical Asso[illegible] his home in Vineyard Haven, Mass April 20

John N Groves, M.D Rush Medical College, Chicago, 1866, a member of the Illinois State and Effingham County medical societies, during the Civil War surgeon of the Ninety eighth Illinois Mounted Infantry and of the Fourth Michigan Cavalry, died at his home in Effingham, April 26, after an illness of five days

John P Wilson, M.D University Medical College of Kansas City, Mo, 1902, of Liberty, Mo, a member of the Missouri State Medical Association and Clay County Medical Society, coroner of Clay County, was crushed under an overturned wagon, near Randolph, and died April 25, aged 37

Amos T Williams, M.D University of Pennsylvania, Department of Medicine, Philadelphia, 1900, of Ridgway, Pa, a member of the Medical Society of the State of Pennsylvania and of the Elk County Medical Society, died at Southern Pines, N J, February 18, from heart disease, aged 34

Irene Dupont Young, M.D Pennsylvania Medical College, Philadelphia, 1848, a member of the Medical Society of New Jersey and Burlington County Medical Society, consulting surgeon at Mercer Hospital, Trenton, N J, died at his home in Bordentown, N J, April 26, aged 82

John Kautz, M.D Hospital College of Medicine, Louisville, Ky, 1874, a veteran of the Civil War and for many years a practitioner of Dora, Ind, died at the home of his son in Irvington Indianapolis, April 24, from bronchitis, after an illness of a few weeks, aged 72

Charles Wayne McCoy, M.D Jefferson Medical College, Philadelphia, 1889, of South Point, Ohio, a member of the Ohio State Medical Association and Lawrence County Medical Society, is reported to have been shot and killed by John Davis, May 2, aged 40

David Yandell Walsh, M D University of Louisville (Ky) Medical Department, 1897, a member of the Kentucky State and Jefferson County medical societies, died at his home in Louisville, April 28, from pneumonia, after an illness of two weeks, aged 30

Melvin B Hubbs, M D College of Physicians and Surgeons, Baltimore, 1883, formerly president of the Steuben County (N Y) Medical Society and president of the village of Addison, died at his home in that place, April 24, aged 55

andover L Chester, M.D College of Physicians and Surgeons, Keokuk, Iowa, 1880, for many years a practitioner of arthage, Mo, died at his home in that city, April 24, from diabetes, after an illness of three months, aged 64

William Huntington Leonard, M.D Medical Institution of Yale College, New Haven, Conn, 1853, who had practiced medicine in Minneapolis, Minn, for 52 years, died at his home, April 29, after an illness of almost a year, aged 85

John Lafferty, M.D Homeopathic Hospital College, Cleveland, 1876, formerly a member of the board of deputy state supervisors of elections died at his home in Columbus Grove, Ohio, April 11, after an illness of two months, aged 60

Herbert K Stiles, M.D Medical School of Harvard University, Boston, 1895, formerly house surgeon at Carney Hospital, Boston, of Somerville, Mass, died April 27, at Everett, Mass, from pneumonia, after a short illness, aged 38

Louis J Schifferstein, M.D St Louis (Mo) Medical College, 1873, a member of the Illinois State and Effingham County medical societies, a practitioner of Effingham for 25 years, died at his home in that city, April 26, aged 57

Guy C Holcomb, M D Jefferson Medical College, Philadelphia, 1887, a member of the Bradford County Medical Society and formerly coroner of Bradford County, died at his home in Ulster, Pa, from tuberculosis April 25, aged 41

Thomas J Myers, M.D Philadelphia College of Medicine and Surgery, 1850, a member of the De Soto (Fla) County Medical Society, formerly surgeon of the Plant System, died at his home in Bowling Green, Fla, April 21, aged 80

A. G Henderson, M.D Jefferson Medical College, Philadelphia 1861, a member of the Medical Society of the State of North Carolina and Rowan County Medical Society, died at his home in Woodleaf, N C, March 27, aged 74

Frank P Webster, M.D College of Physicians and Surgeons, Baltimore, 1878, Hahnemann Medical College and Hospital, Philadelphia, 1879 died suddenly from heart disease, April 26, at his home in Norfolk, Va, aged 54

Ed L Burdick, M.D College of Physicians and Surgeons, St Joseph Mo., 1871, a veteran of the Civil War, later a member of the state legislature of Arizona and county treasurer, died at his home in Azusa Cal April 10

John James Blacklock, M.D McGill University Medical Faculty, Montreal, 1851, for 40 years coroner of Stormont, Dundas and Glencarry counties, Ont, died at his home in Morrisburg, Ont, recently, aged 83

Joseph C Hall, M D Medical College of Ohio, Medical Department of the University of Cincinnati, 1873, died at his home in Decatur, Ill, from uremia, April 24, after an illness of several weeks, aged 67

Isaac T Lechtman, M.D University of Kowno, Russia, 1864, some time surgeon in the Russian army, and president of the Missouri Medical Society in 1893, died at his home in St Joseph, Mo, April 11

Claud A. Thixton, M.D Hospital College of Medicine, Louisville, 1894, of Louisvile, died at his family home, Fairmount, near Louisville, April 27, from typhoid fever, after an illness of eight weeks, aged 37

Gustave Schoenberg, M.D University of Berlin, Germany, 1848, surgeon in the Japanese service from 1874 to 1877, died at his home in Philadelphia, April 19, after an illness of seven years, aged 81

Alfred A. Moors, M.D Memphis Medical College (Medical Department of Cumberland University, Memphis, Tenn.) 1854, formerly of West Winfield, N Y, died in Buffalo, N Y, March 24, aged 75

Charles D Mattison, M D College of Physicians and Surgeons, Baltimore, Md., 1899, died at his home in Minetto, N Y, April 22, from the effects of an overdose of chloral, aged 35

Robert Purdon McCready, M.D Jefferson Medical College, Philadelphia, 1905, physician to the Maryd (Pa) Coal Company, died at Tamaqua, Pa, April 28, from peritonitis, aged 29

Elijah J Galbraith, M D Medical College of Ohio, Medical Department of the University of Cincinnati, 1870, died at his home in Chillicothe, Ohio, April 23, after a long illness, aged 68

William Gadson Allen, M.D Maryland Medical College, Baltimore, 1905, died at his home in Surrency, Ga. March 21, from typhoid fever, after an illness of 26 days, aged 27

Felix Ferriere, M D American College of Medicine, Pennsylvania, 1868, died recently at his home in St Joseph, Mo, from senile debility, and was buried April 29, aged 86

William H Morgan, M.D Rush Medical College, Chicago, 1874, died at his home in Middletown, Ind., April 18, from tuberculosis, after an illness of a year, aged 67

Benjamin Tomlin, M.D Cincinnati College of Medicine and Surgery, 1865, died at his home in St Louis, April 26, from pneumonia, after an illness of ten days, aged 72

Lorenzo D Wiggins, M.D Geneva (N Y) Medical College, 1865, a veteran of the Civil War, died at his home in Wayland, Iowa, April 9, from pneumonia, aged 86

J Leroy Blakeman, M D New York Homeopathic Medical College and Hospital, New York City, 1899, died at his home in New York City, March 29, aged 34

George Irvin, M.D Jefferson Medical College, Philadelphia, 1855, died at his home in Aledo, Ill, April 22, from angina pectoris, after a short illness, aged 81

John Edgar March, M.D Bellevue Hospital Medical College, New York City, 1879, died at his home in Partridge Island, St John, N B, April 3, aged 50

Andrew Harkness, M.D McGill University Medical Faculty, Montreal, 1869, died from pneumonia at his home in Lancaster, Ont., February 6, aged 61

George Leibrock, M.D Homeopathic Medical College of Missouri, St Louis, 1878, died at his home in Mascoutah, Ill, January 24, aged 78

Charles M Kellogg, M.D University of Buffalo (N Y) Medical Department, 1884, died at his home in Rochester, N Y, March 29, aged 61

Eton B Crowell, M.D Eclectic Medical Institute, Cincinnati, 1895, died at his home in Minneapolis, Minn, April 15, from nephritis, aged 47

Sarah M. Leahy, M.D Northwestern University Woman's Medical School, Chicago, 1895, died at her home in Anaconda, Mont, in March

Andrew D Ingleright, M.D American Health University Chicago, 1895, died at his home in North Liberty, Ind, April 19, aged 65

Adam A. Simmons, M.D Eclectic Medical Institute, Cincinnati, 1865, died at his home in Girard, Ill, April 22, aged about 80

Esrom Aram Duclos, M.D McGill University Medical Faculty, Montreal, 1874, died at his home in Fall River, Mass, April 19

Medical Education and State Boards of Registration

COMING EXAMINATIONS

MISSISSIPPI State Board of Health State Capitol Jackson May 14 Secretary Dr J F Hunter, Jackson.

MASSACHUSETTS Board of Registration in Medicine Room 15 State House Boston, May 14-16 Secretary Dr E B Harvey Boston

FLORIDA State Board of Medical Examiners (Regular) Jacksonville May 15-16 Secretary Dr J D Fernandez, Jacksonville

NEW YORK State Boards of Medical Examiners, Albany May 21 24 Chief of Examining Division Charles F Wheelock Albany

NEBRASKA State Board of Health State House, Lincoln, May 28 29 Secretary, Dr Geo H Brash Beatrice

INDIANA Board of Medical Registration and Examination, Room 120 State House Indianapolis, May 28 31 Secretary Dr W T Gott, Indianapolis

Missouri State Board Questions—Dr J A B Adcock, secretary of the Missouri State Board of Health, sends us the following list of questions asked at the examinations held in St Louis and Kansas City, April 16 18, 1907

BACTERIOLOGY

1 What is meant by 'alexins? 2 Describe in detail Widal's test 3 Explain serum therapy and give two illustrations 4 Describe a method for distinguishing the typhoid bacillus in a post typhoid abscess 5 Give in detail a method of staining tubercle bacilli (a) in fluids (b) in sections

JURISPRUDENCE.

1 What is superfetation? 2 What is a hermaphrodite? 3 What is sodomy? 4 What are ptomains? 5 In what food is tyrotoxicon found?

HYGIENE.

1 Mention three diseases in which you would institute quarantine Give period of incubation length of quarantine and prophylaxis in each. 2 What do you understand by (a) antiseptics (b) disinfectants, (c) deodorants. Name three of each class and method of using them 3 Mention three chemical agents frequently found in milk used as preservatives Give test for two of them 4. What do you understand by ventilation? How much cubic space should be given a school room containing 100 children to insure fresh air? 5 What do you understand by (a) toxins (b) antitoxins (c), predisposition (d) immunity

ANATOMY

1 Name the cranial nerves in their order and with reference to their function 2 Name the salivary glands. Give exact location and name of ducts through which they discharge 3 Give origin insertion and function of the following muscles (a) Trapezius (b) sternomastoid (c) sartorius (d) pectoralis major 4 Describe the shoulder joint. 5 What is (a) Lymph (b) cellular tissue (c) adipose tissue (d) muscular tissue. 6 Describe femoral artery Give its branches 7 Give landmarks for locating the mastoid cells. 8 What is the (a) epiblast (b) hypoblast, (c) mesoblast, and what anatomic structures are formed by each? 9 Give regions of the abdomen and their contents 10 Mention all abdominal viscera not completely invested by peritoneum

PATHOLOGY

1 Give the pathologic changes in chlorosis 2 Give the pathologic changes in cirrhosis of the liver 3 Discuss the process in local infection. 4 Discuss the formation of gallstones 5 Describe the gross appearance of the kidney in chronic interstitial nephritis

CHEMISTRY

1 What is the chemical composition of muscular tissue? 2 Give toxicology of opium and treatment for same 3 Give test for arsenic (b) for sulphuric acid, (c) for nitric acid. 4 What are some of the chemical characteristics of the chlorids of mercury? 5 Give chemical changes occurring in food during process of intestinal digestion

SURGERY

1 Describe in detail the examination and treatment of a scalp wound inflicted by a blow on the head 2 Give the symptoms and treatment of a penetrating wound of the trachea 3 Give the causes symptoms and treatment of acute infective lymphangitis 4 What are the causes and symptoms of fracture of the patella and what is the object to be accomplished in the treatment? 5 Differentiate purulent and sanguineous effusion into the knee-joint and describe the treatment of each condition 6 Enumerate the symptoms of tetanus and describe the prophylactic treatment as well as the measures to be instituted after the disease has appeared 7 By what symptoms would you recognize and how would you treat a penetrating wound of the urinary bladder? 8 Describe the steps to be taken in the first dressing of an open oblique fracture of the tibia. 9 Describe the amputation at the knee giving the incisions the structures divided and the dressing of the stump 10 Give the symptoms and a method of reducing a subglenoid dislocation of the humerus.

THERAPEUTICS

1 to 10 give indications for use of aconite belladonna gelsemium echinacea digitalis nux vomica opium quinin, mercury veratrum viride

GYNECOLOGY

1 Describe ovaritis Describe ovaralgia. Give treatment of each. 2. Describe endometritis Give pathology etiology and trea 3 Define vaginismus, giving pathology etiology and trea Define pruritus vulva, giving pathology etiology and trea Define prolapsus uteri, giving pathology etiology and tre

OBSTETRICS

1 When should chloroform be used in a case of labor? Give its effect on mother and child When is it contraindicated? Distinguish between adherent and retained placenta. Give manner of treating each 3 Give cause and treatment of mammary abscess in the puerperal state. 4 Give after treatment of incomplete abortion Give symptoms and treatment of threatened abortion 5 Give method of caring for the umbilical cord. Discuss hemorrhage of the cord. Give treatment of each. 6 Distinguish a primipara from a multipara. 7 Give description of the placenta and umbilical cord giving their origin and function 8 Distinguish false from true labor pains What is morning sickness? Give treatment for the same 9 Give manner in which new born should be washed and dressed first time. 10 Give indications for induction of premature labor with best time for same and prognosis

PHYSIOLOGY

1 Describe cerebellum and give its function 2 Name digestive ferments and give function of each 3 Describe the heart cycle 4. Give brief description of special sense of hearing 5 (a) Describe mammary gland and process of milk secretion (b) Also causes that lead to variation in quantity and quality of milk 6 Name ductless glands and give supposed office of each 7 What do you understand by internal respiration? 8 (a) On what does temperature of human body depend? (b) Why in a healthy individual does it remain practically constant? Given an exposed artery and vein in the living subject, how would you distinguish them without reference to anatomic landmarks? 10 Describe the pneumogastric nerve and give its functions

PRACTICE.

1 What is dropsy? Give the name or terms by which the various dropsies are known and their location. 2 Give symptoms and treatment of diabetes mellitus 3 Give the etiology symptoms and treatment of pericarditis 4 Give the etiology symptoms and treatment of cerebrospinal meningitis 5 Give chief diagnostic symptoms of cancer of stomach 6 Describe (a) An irregular pulse (b) intermittent pulse (c) dicrotic pulse 7 What is meant by incubation period? 8 Discuss palpitation of the heart 9 How would you differentiate a functional derangement from an organic lesion? 10 Give etiology and symptoms of angina pectoris

Supreme Court Sustains Medical Practice Act—The United States Supreme Court has entered a decision in the case of the Washington State Medical Examining Board vs O V Lawson of Seattle, confirming the action of the Washington Supreme Court in sustaining the lower court in which Lawson was convicted of practicing medicine illegally and sentenced to three months in the county jail About two years ago the physicians of Seattle determined to put a stop to the illegal practice of medicine, as carried on in the state. A fund of $2,000 was raised to prosecute illegal practitioners As a result, a little over a year ago, O V Lawson was sentenced to pay a minimum fine and to spend three months in the county jail At the time of his conviction he was conducting what he called the "State Medical Institute," and was doing an advertising business He was also proprietor of a concern known as the "Victor Medical Company" After being convicted in the lower court, he appealed to the Superior Court, thence to the Supreme Court of the state and finally to the United States Supreme Court The points made by him in his brief before the United States Supreme Court were that he was deprived of his liberty without due process of law, that he was deprived equally of the protection of the law contrary to the fourteenth amendment, and that the medical practice act of the State of Washington is unreasonable uncertain, indefinite, and therefore void The decision of the Supreme Court is of importance, not only in this case, but in several others of a similar nature which are pending, awaiting the decision on the Lawson case

Higher Requirements for Washington University and Sioux City College of Medicine—Dr Robert Luedeking, dean of the Medical Department of Washington University, St Louis, writes to us that at a recent meeting of the faculty it was decided to require besides a four year high school education, a year devoted to physics, chemistry, biology and one language as an additional entrance prerequisite after Jan 1, 1910 ——Dr F E Franchere, of the Sioux City College of Medicine, Sioux City, Iowa, writes that a similar requirement has been adopted by that school There are now 45 schools which, after Jan 1 1910 will require one or more years of preliminary work in a college of liberal arts

Wyoming March Report.—Dr S B Miller secretary of the Wyoming State Board of Medical Examiners reports the written examination held at Laramie March 13 14 1907 The number of subjects examined in was 10, total number of questions asked 100 percentage required to pass 75 The total number of candidates examined was 4 all of whom passed. The following colleges were represented

Co	Coll. D oll	Year Grad	Per cent
		(18	04
		(1	8
		(18	

Book Notices

LECTURES ON DISEASES OF THE LUNGS By J A. Lindsay, M D, F R C.P Second Edition Enlarged and Rewritten Cloth. Pp 509 Price, $4 00 net. New York William Wood & Company

Lindsay presents a clear and concise summary of the various diseases of the lungs from the point of view of their physical signs and diagnosis, with notes on treatment. Unlike many of the texts on physical diagnosis, it is neither too brief nor are the facts obscured by a multitude of words Each chapter is preceded by a summary of its contents, thus giving at a glance an outline of the subject following The earlier chapters consider the signs encountered in diseases of the lungs and pleuræ in general, explaining their occurrence as far as possible by reference to the physical conditions of the tissues The author treats the subject of adventitious sounds simply and avoids the introduction of any new terminology The chapters on pleurisy, empyema and pneumothorax will prove of particular interest and value to the student. The second portion of the book deals with the more important diseases in which the local process involves chiefly the lungs, including pneumonia and pulmonary tuberculosis The discussion of pneumonia is not on a par with the standard of excellence set by the remainder of the book, and is evidently based on personal observations of a limited series of cases The disease is considered almost exclusively from the point of view of the local trouble in the lung, with its accompanying toxemia, and space is unprofitably taken in the attempt to account for metapneumonic conditions which are easily explained if we recognize that in pneumonia we are dealing with a bacteriemia demonstrable by our modern blood culture methods

The therapeutic treatment is taken up from a rational point of view, *recognizing that no single drug is a panacea, and that* the efforts of the physician must be directed toward combating the toxemia and supporting the heart In this connection it is rather surprising that the author should declare emphatically against the practice of bleeding even in selected cases Here again it would seem that the limited series of cases may explain the author's uncompromising stand against the "Bloody Moloch" The rather brief discussion of bronchitis, emphysema, bronchiectasis and asthma is followed by several admirable chapters on pulmonary tuberculosis The section dealing with treatment and prognosis of pulmonary tuberculosis is decidedly hopeful in tone, in keeping with our more recent views that many of the early cases and not a few of those with more advanced lesions not only may improve, but may terminate in cure A brief review is given of the newer work on the opsonic index in tuberculosis and the therapeutic use of minimal injections of tuberculin

The book closes with chapters on the rarer forms of disease in the lungs and the special features of pulmonary disease in children As a whole the book is clear in style, interesting and the arrangement of the subject matter good It is well worth reading and study by student and practitioner alike

ANATOMIC TERMINOLOGY with Special Reference to the Basle Anatomic Nomenclature. By Lewellys F Barker M D Professor of Medicine Johns Hopkins University Baltimore With Vocabularies in Latin and English and Illustrations Cloth Pp 103 Price $1.00 net. Philadelphia P Blakiston s Son & Co 1907

The BNA system of anatomic nomenclature has already been adopted in several anatomic laboratories and is used by some of the recent atlases and text books and has attained such importance that a work explaining it, such as the one before us, is very timely The title in common use—BNA (Basle Anatomic Nomenclature)—is doubtless strange to many, but is as simple as the principles of the system which it denotes The Basle Anatomic Nomenclature is an attempt to simplify terminology by adopting for each part only one Latin name as short and as simple as possible The terms are to be merely memory signs and related terms as far as possible are to be similar Adjectives in general are arranged as opposites—e g, dexter and sinister, major and minor, etc. After giving some account of the way in which the system was formed, the book answers some of the objections to the plan and makes some suggestion to promote its adoption Then follows a list of the terms in Latin with English equivalents It is to be remembered, however, that only the Latin terms are authoritative and the English terms are subject to *variation as use may dictate* The systematic terms are not so different from those formerly in vogue as might be supposed, since they are mostly a selection from the terms formerly used Personal names have been retained in some cases in brackets following the regular name Thus we have ligamentum inguinale (Poupart) In time it will be known whether it is to be called ultimately the inguinal ligament or after Poupart's name The book is of special interest to teachers and students of anatomy and to physicians who wish to understand the advanced system of nomenclature

TREATMENT OF DISEASES OF THE DIGESTIVE SYSTEM By R. Saundby M D M Sc. LL D F R C P, Professor of Medicine in the University of Birmingham etc. Cloth. Pp 133 Price, $2 75 Philadelphia J R. Lippincott Company, 1906

In this small volume an attempt is made to give the diagnosis and treatment of diseases of the stomach and intestine Although the author must be given credit for including in a small space the essentials of his subject, the limitations of space have entailed omissions which tend to impair the value of the work and in some instances lay it open to serious misinterpretation by the inexperienced reader To mention two examples, we find the titration of the gastric juice directed to be carried out on 5 c c instead of 10 c.c as is customary The statement is then made that the quantities of acid are usually expressed by the number of cubic centimeters of sodium hydrate solution needed to saturate the gastric contents The reader is not informed whether the amount to be saturated is 5 c.c, as he would naturally infer from the previous directions, or 100 c c, as is customary In describing the test for blood in feces both guaiac and aloin are mentioned and the color produced if blood is present is said to be red, with no mention of the blue obtained when guaiac is used No clinical applications of this test are given and the fallacy arising from the presence of meat in the diet is not mentioned

The clinical observations and therapeutic advice are good *The author finds little reason to recommend the application* of electricity in gastrointestinal diseases Acids are useful, he states, but the explanation of their value is not in their digestive power, but in their tonic action The digestive ferments receive little credit, the author calling attention to the fact that even malt preparations are seldom required because the diastase of the saliva is nearly always sufficient

HISTOLOGIC OBSERVATIONS ON SLEEPING SICKNESS AND OTHER TRYPANOSOME INFECTIONS By F W Mott, M D F R.S (From the Pathologic Laboratory of the London County Asylums) Cloth Pp 50 Price $1 50 net. New York William Woods & Co 1907

It is now admitted that sleeping sickness is caused by the presence of the *Trypanosoma gambiense* in the lymphatic glands and cerebrospinal fluid The disease is characterized by chronic polyadenitis, which is subsequently followed by a chronic inflammatory change in the lymphatics of the brain and spinal cord characterized by proliferation and overgrowth of the neuroglia cells, especially those which are related to the subarachnoid space and perivascular lymph spaces, with accumulation and probably proliferation of lymphocytes in the mesh work. The histologic changes produced are described in this volume

The material used was from twenty four natives and two Europeans with sleeping sickness and from the tissues of various animals infected with trypanosomes The book is illustrated by a number of colored plates, showing the histologic changes, and must be regarded as an important contribution to the literature of tropical medicine

HINTS ON THE MANAGEMENT OF THE COMMONER INFECTIONS By R. W Marsden M D M R C P D P H Honorary Physician to the Ancoats Hospital Manchester Cloth Pp 128 Price $1 50 New York E B Treat & Co 1907

This work gives a brief résumé of the principles of treatment to be observed in the management of the commoner diseases due to the action of micro-organisms, either directly or indirectly Under "General Measures," the author discusses The indications and contraindications for the application of cold baths in fevers, the importance of rest, ventilation and temperature of the sick room, principles of feeding, limitations of treatment by drugs, including the abuse of purgatives

Under "Specific Infections" are considered invasion of the body by septic micro-organisms and the various contagious and infectious diseases There are two appendices, one deals with isolation and the other with disinfection

CATHOLIC CHURCHMEN IN SCIENCE. Sketches of the Lives of Ecclesiastics Who Were Among the Great Founders in Science By James J Walsh, M.D, Ph D LL.D Professor of Medical History Fordham University Medical School Cloth. Pp 221 Price, $1 00 net. Philadelphia The Dolphin Press 1906

Dr Walsh has gathered in this neat little volume some biographical essays which he contributed to various Catholic papers Among the scientists to whom chapters are devoted are several who were either physicians or noteworthy contributors to medicine Copernicus, the great astronomer, Basil Valentine, founder of pharmacologic chemistry, Linacre, founder of the Royal College of Physicians of London, Steno, for whom Steno's duct is named, and who was a famous geologist, Kircher, who pointed out contagion and presaged the discovery of bacteria, Hauy, the crystallographer, and Mendel, whose name is linked with our knowledge of heredity Sufficient is given of the life of each individual to give the reader a general knowledge of the man and his work, omitting the unimportant details

URINARY ANALYSIS AND DIAGNOSIS By Microscopical and Chemical Examination By L Heitzmann M D Second Revised and Enlarged Edition 131 Illustrations Cloth Pp 319 Price $2 50 net. New York William Wood & Company

In this edition great stress has been laid on microscopic examination of urine and especially on microscopic diagnosis, but the chemical examination has not been slighted The tests given are those which may be made by the practitioner rather than those which require an extensive equipment such as can be found only in the large laboratories The illustrations are not of the routine character found as a rule in text books of this kind, but have been drawn by the author from his own specimens

PRACTICAL DIETETICS With Reference to Diet in Disease by Alida Frances Patee, Late Instructor in Dietetics Bellevue Training School for Nurses Bellevue Hospital New York City Fourth Edition. Cloth Pp 312 Price, $1 00 net New York A. F Pattee

Nurses and others who prepare food for the sick will appreciate this practical handbook The recipes are simple and easily understood

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every day practice. Contributions will be welcomed from our readers]

THE METRIC SYSTEM AND HOW TO USE IT

W A Jolley, M D
BOULDER, COLO

The revision of the United States Pharmacopeia, with its numerous changes, the work of the American Medical Association in educating the physicians by its investigations of the proprietary preparations, and the fight against patent medicines, have created an opportune time for physicians to get out of a rut and to take a step forward in therapeutics, the knowledge of which has been badly hampered by ignorance of pharmacy A glance at the prescription file will show that a deplorable condition exists

NEED OF A UNIFORM STANDARD

The first step will be a study of the methods of measurements employed The standards are governed by custom and the physical characteristics of the substances to be handled Custom has caused many arbitrary standards to suit specific needs, and, as a result, the same term may have a variety of values For example, an ounce may mean 437 5 grains in the avoirdupois system of weights, or 480 grains in the apothecaries' weights The term "drop" is even more uncertain, and yet it is used for fancied precision in handling toxic liquids like the tincture of aconite The size of a drop is dependent (1) On the liquid to be selected, a drop of water is almost a minim, but it takes four drops of chloroform to make a minim, (2) on temperature, which affects the size of drops, as one can see in handling hot and cold liquids, like syrups and oils, (3) on the size and shape of the orifice, which has a great influence on the size of the drop

A drop of water is supposed to be a minim, and to weigh 1 grain. The actual weight is 0 9508 of a grain The weight of an ounce (480 minims) of water then will be 480 × 0 95 = 456 4 grains The quantity "grain" is an arbitrary standard obtained by stating that a cubic inch of water weighs 255 33 grains

HOW THE METRIC SYSTEM WAS ACQUIRED

Such standards are so complex, cumbersome and inaccurate that scientific advancement required a system which would be suited to universal use and the accuracy which modern science demands This system is called the metric system, and has been universally adopted by the scientific investigators who have accomplished so much work during the past twenty five years These men are on unknown ground, and unhampered by tradition they have been able to use this new system in their work Advance along the line of scientific medicine has been retarded by the slipshod manner in which drugs have been prescribed

All progressive physicians keep abreast with the latest theories and principles of diagnosis, yet these men will not exercise the same care in dispensing the toxic agents, which we call medicines, even when they know that life often depends on the accuracy of the dosage Naturally some difficulty must be expected in changing methods which have been used for many years but we have been compelled to adopt new theories We can change to the metric system without danger or friction, but it must be a genuine conversion We must drop the old and take up the new without any modifications Do not transpose doses from the one system to the other, but use the metric alone and insist that the druggists do the same The metric weights and measures are as easily manipulated as the apothecaries , the difficulty is in computing the proper dosage The same method should be applied in studying this new system as in acquiring a foreign language We learn the name of a certain object in the new tongue, use it repeatedly, and in a short time we can associate the two without mental effort In the metric system we should ascertain the value of a gram or cubic centimeter, then work with it until we are familiar with it. This will be our basis for all computations

In dispensing many physicians use the familiar old standard of household measurement—a teaspoon A moment's work with a graduate will show that with this standard we have long erred, for the contents are far above the dram, which we have always used as its equivalent This error has been introduced into the metric system, for most tables give the equivalent of a teaspoonful as four (4) cubic centimeters Actual tests will show that the usual teaspoon will hold five (5) cubic centimeters The larger quantities used in writing prescriptions are multiples of 5, e g—50, 100, 250, 500 1 000

(This subject will be continued)

Diarrhea

Diarrhea is a term loosely though correctly applied to all forms of intestinal disturbance accompanied by the passage of liquid feces The treatment of each form depends on its cause, diarrhea is not a disease but a symptom

Treatment of the catarrhal form consists primarily in regulation of the diet, which should be made up chiefly of milk boiled or predigested or of milk whey Castor oil or some other mild purge such as sulphate of magnesium should be administered to sweep out fermenting food or mucus Enough laudanum should be given with the oil to prevent griping Hare in "Practical Therapeutics" states that it is well to add bicarbonate of soda grains xx to xxx (1 3 to 2 0) to the dose both to aid the action of the oil and to render the bowel alkaline (normal) in reaction instead of acid as caused by the fermentation A mustard plaster or other counterirritant should be applied to the abdomen Often the milder forms of mucous diarrhea t that is but sometimes it is necessary to f tom ringents—The following pills are

the public newspapers of the city of New York to the effect that she cured "irregularities or no charge, longest cases, ladies boarded, 213 East Seventy eighth Street," that she received into the house indicated a large number of women who were with child, and that she used instruments in producing abortions

The defendant was charged with maintaining a public nuisance under the provision of sections 385 and 387 of the New York Penal Code The section concerned, so far as it was involved in this appeal, defines a public nuisance to be "a crime against the order and economy of the state, and consists in unlawfully doing an act, or omitting to perform a duty, which act or omission (1) annoys, injures or endangers the comfort of persons, or (2) offends public decency"

The defendant insisted that no crime under section 385 of the Penal Code was stated in the information, and that, therefore, the motions on the opening and closing of the case and in arrest of judgment should have been granted There was no attempt to dispute that the defendant made admissions of the character above stated to the witnesses called by the people, but it was urged on the part of the defendant, that as section 294 of the Penal Code makes abortion a crime of a higher character, there was no jurisdiction in the trial court of the offense charged as a public nuisance Great reliance was placed on the fact in support of this contention, that no adjudicated case had been found in which it has been held that the maintaining of a house for the purpose of practicing the vocation of an abortionist, constitutes a nuisance

It is true, as a general proposition, the court says, that if a house is so kept that no one outside of its inmates is disturbed, annoyed or corrupted in their morals, it is not in law a disorderly house The annoyance of corrupting influence must reach beyond the inmates and affect the public peace or morals of the community (1 Bishop on Criminal Law, Sec 1051), but the same author says that this doctrine should "not be so applied as to exempt any man from indictment, whose house is practically set open to the public, alluring the young and unwary into it for the purpose of their indulging in anything corrupting to their virtue, sobriety or general good morals If a man would shield himself from indictment when he allows wicked and corrupting practices within his house he should keep his doors, while those practices are carried on, closed to the outer world" (Sec. 1053) Again, this same learned author says 'If a house is of common resort for the commission of petty offenses against the laws, such as offenses punishable by fine, it is indictable on this ground, though not otherwise disorderly" (Sec. 1053) In the following section he declares that this principle is as old as the law itself, that "a man who holds out inducements for people to congregate, and together commit violations of a statute, not only lends the concurrence of his will to their wrongful acts, but also does what most powerfully tends to disrobe the body politic of her virtue and of the drapery of that order which the hand of government has thrown around her" In section 1057 he continues 'To bring a case within this principle, the particular acts must be either indictable or, in some sense, unlawful Therefore, the English court quashed an indictment which charged one with converting a house into a hospital for taking in and delivering lewd, idle and disorderly unmarried women, 'who, after their delivery, went away and deserted their children, whereby the children became chargeable to the parish' 'By what law,' asked Lord Mansfield, 'is it criminal to deliver a woman when she is with child?'" In this there is a clear intimation that the indictment would have been good had it charged that the house was for the crime of abortion, rather than the lawful delivery of children

Construing the provisions of the Penal Code under which this charge was made in the light of the common law, it is only a just construction to hold that the broad language used embraces the offenses of the common law rule As before seen, the section defines a nuisance to consist in unlawfully doing an act which annoys, injures, endangers the comfort, repose, health or safety of any considerable number of persons, or offends public decency This surely is as broad and inclusive in terms as the rule of the common law, which has been made the subject of the code provisions At common law it would have been, and under the code provisions it is, a nuisance for a person, by public advertisement, to invite and receive a class of the public to his premises for the purpose of violating the laws of the state, as was done in this case This, in the court's opinion, constitutes "crime against the order and economy of the state" by offending "public decency"

It is the duty, therefore, of this court, in accord with law, to sustain this conviction The offense of abortion is one thing, that of maintaining premises open to the public for the purpose of consummating that crime, is another and separate offense against the peace and good order of the state It is an inducement to moral laxity and to crime, and is within the letter and spirit of the sections of the Penal Code here under consideration

Throwing Pepper Not Attempt to Commit Mayhem.

The Supreme Court of Illinois says, in Dahlberg vs People, that mayhem (violently depriving another of the use of a member used in fighting), under the common law, while less inclusive than under the Illinois statutes, did include the striking out or blinding of an eye The Illinois statutes provide that, whoever, with malicious intent to maim or disfigure, puts out or destroys an eye, etc, shall be imprisoned, etc They also provide that whoever attempts to commit any offense prohibited by law, where no express provision is made by law for the punishment of such attempt, shall be punished, etc. The court does not think that an ineffectual effort to throw red pepper into another's eyes is an assault with attempt to commit mayhem It does not think that the act of throwing red pepper is such a one as in the course of the usual and natural laws would, if uninterrupted, result in the crime of mayhem But it says that it did not find it necessary to consider the question as to whether the defendant could be convicted of an attempt at mayhem if, when she threw the pepper, she thought she had employed adequate means, and intended to destroy the eyesight, when, in fact, she used inadequate means for this purpose There was no testimony in the record tending to show that she so believed and intended, and while in criminal cases the criminal intention may be manifested by the circumstances connected with the perpetration of the offense without any positive testimony as to intention, it certainly could not be inferred because the defendant used inadequate means that she intended to use adequate means

Damages for Pain, Especially from Injury to Toes

The Supreme Court of Arkansas says, in St Louis, Iron Mountain & Southern Railway Company vs Snell, a personal injury case brought by the latter party, that it is difficult for a jury to estimate the amount of compensation to be allowed for pain and suffering It is an element of damages which is indeterminate in its character, and of which there is no exact standard of admeasurement Jurors must exercise their judgment and discretion in fixing fair and just compensation for the injury It is also a matter of great difficulty and of considerable delicacy for a reviewing court to determine whether or not the amount fixed by the jury is excessive But there is a limit to the power of the jury, and, when the just limit is transcended by fixing an amount which is clearly excessive, the duty of the court is plain

In this case the toes of the plaintiff, a child 6 years old, were mashed and bruised, and the skin was rubbed or scraped off On the left foot the flesh was split about a half inch between two of the toes No bones were broken or injured, and there was complete recovery in a few weeks, no permanent injury resulting The witnesses testified that the injury was painful, and that the child appeared to suffer much therefrom, especially when the wounds were dressed She had slight fever for several days, which the attending physician testified probably resulted from the nervous shock As there was no permanent injury, mutilation or disfigurement of the child's feet, the only element of damages was the pain and suffering resulting from the wounds The jury returned a verdict in favor of the plaintiff for $1,500 damages

The court entertains no doubt that the verdict in this case went far beyond the limit of just compensation to the plaintiff for the pain and suffering which she endured, and that the jury either misconceived the proper standard of measuring the damages, or were prompted by sympathy for the plaintiff to prejudice against the defendant After careful consideration of the evidence it is convinced that it did not warrant a recovery of an amount exceeding $750

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

April 27

1 Arteriosclerosis H N Heineman Bad Nauheim Germany
2 *Malignant Disease and Malaria C F Kieffer Fort D A. Russell, Wyo
3 Notes on Six Thousand Cases of Neurasthenia C D Cleghorn, New York
4 Pathology of Gonorrhea in Women H C Coe New York.
5 Gonorrhea in Women W S Stone New York.
6 Gonorrhea During Pregnancy J C Edgar New York
7 *The Eye and Ear Complications of Influenza C Graef New York

2 **Malignant Diseases and Malaria**—Kieffer concludes from his observations of the occurrence of malaria and cancer in Cuba and the Philippines that there is no real antagonism between malaria and malignant disease Malarial infection supervening on malignant disease does not modify it Natives of tropical countries have a relative immunity to malignant disease which varies widely Adoption of civilized ways of life by natives diminishes this immunity

7 **Eye and Ear Complications of Influenza**—Graef says that eye complications are comparatively rare in the course of influenza, while ear complications are frequent The eye complications are conjunctivitis, inflammations of the lachrymal duct, corneal and lid herpes, and aching pains due to swelling of the lining of the frontal sinuses, embolic processes caused by mixed infections, iritis and glaucoma, as well as nervous disorders of vision Ear troubles are acute middle ear catarrh and mastoiditis

New York Medical Journal.

April 27

8 *Physical Processes of Immunity and Infection J Wright New York.
9 The Milk Problem H G Piffard New York.
10 Bursting Fracture and Compound Fracture of the Cranial Vault J S Wight Brooklyn
11 Traumatic Luxation of the Head of the Fourth Metatarsal L D Frescoln Philadelphia
12 Cystoscopy in Tuberculosis of the Urinary Tract W Meyer New York
13 *Bacteriologic Examination of Blood An Hermetically Sealed Bouillon Tube for Bedside Use G W McCaskey, Fort Wayne Ind
14 *Severe Ocular Pain Associated with Grippe J T Krall Philadelphia.
15 Infantile Chorea and Tic Their Symptoms and Treatment H Richardson Baltimore
16 *An Unusual Symptom in Chorea G E Price Philadelphia
17 Roentgen Rays in Dermatology R H Boggs Pittsburgh

8 **Immunity and Infection.**—This is the fifth paper by Wright In it he discusses the evidences of electro dynamic forces in the intracellular processes of growth and protection

13 **Bacteriologic Examination of Blood**—In order to have a permanent preparation of bouillon always at hand in a readily transportable form, McCaskey has had made an hermetically sealed tube, containing 100 c c with sufficient air space for agitation These tubes, which are contained in a small pasteboard box, are permanent and when desired for use at the bedside the upper end of the hermetically sealed neck is easily fractured at the line of union with the cap, and the blood which should consist of at least 5 cubic centimeters freshly drawn from a superficial vein in a sterile syringe or through a sterile canula instantly thrown into the bouillon and shaken up with it In this way the bacteriolysins are immediately diluted to such an extent that they will have no effect on the micro organisms Even a few minutes' delay may cause failure Accompanying the bouillon tube is a small hermetically sealed tube, also with a breakable ring, which contains a sterilized rubber stopper which is immediately placed in the neck of the tube so that contamination will not occur in transit In the bottom of the phial is also a sterilized pledget of cotton which replaces the rubber stopper as soon as the incubator is reached

14 **Ocular Pain in Influenza**—Krall finds that there is an increasing number of cases of endemic influenza complicated by a sudden seizure of excruciating pain, located in the eyeball, lasting two or three days, unattended by symptoms of inflammation, while the eyeball and its appendages present a perfectly normal appearance The diagnosis is neuralgia of the ciliary nerve due to toxins circulating in the blood acting on the nerve centers or fibers

16 **Unusual Symptom in Chorea**—Price refers to the excessive secretion of saliva accompanied by drooling, which is not infrequently seen in all diseases characterized by marked motor disturbances

Boston Medical Journal

April 25

18 History and Ethics in Medicine I G Mumford Boston
19 *Thrombosis of the Cavernous Sinuses. H G Langworthy Dubuque, Iowa
20 Case of a Positive Agglutination Reaction in Icterus H A. Christian Boston
21 Plea for Conservatism in Gynecology G W Kaan Boston
22 Successful Reduction of Dislocation of the Neck F M Sherman West Newton Mass

19 **Thrombosis of Cavernous Sinuses**—Langworthy gives a detailed report of four cases that followed suppurative otitis media In one case there was mastoiditis and facial paralysis as well as thrombosis of the lateral sinus, both cavernous sinuses and the internal jugular vein The patient died from pyemia The second case was complicated by an extradural abscess, the third case by bronchopneumonia, and the fourth case by meningitis These three patients also died from pyemia Langworthy urges resorting to immediate drainage in the treatment of these cases

St Louis Medical Review

April 20

23 Acute Pan sinusitis as a Complication of Influenza R. H Johnston Baltimore
24 Prophylaxis and Treatment of Syphilis A Ravold St Louis

Chicago Medical Recorder

March 15

25 *Sigmoid Sinus Thrombosis Without Conspicuous Mastoiditis B Holmes Chicago
26 Hypospadia Epispadia Vesical Exstrophy Urethral Atresia Ectopia Testis, Hydrocele Funiculi Hermaphroditism their Embryology and Clinical Importance I A Leusman, Chicago
27 *Ordinary and Unusual Diphtheria C G Roehr Chicago
28 *Management of Scarlet Fever H Spalding Chicago

25 **Sigmoid Sinus Thrombosis**—That sinus thrombosis may occur or be present in a patient who does not present the running ear, or the picture of mastoiditis, is shown by Holmes, who reports a case of this kind as a sequel of scarlet fever An operation was done successfully, and the patient made a complete recovery in three weeks

27 **Diphtheria**—Roehr advocates the use of the microscope in diagnosticating diphtheria, and advises giving large doses of antitoxin In order to get rapid absorption and diffusion of the antitoxin he dilutes it with normal saline solution He says that 3 000 units in one quart of normal saline solution will give as good results in one half hour as 20 000 units of undiluted antitoxin will give in six hours The greater the concentration of the antitoxin the less rapid its absorption and diffusion The fluid is injected subcutaneously or intravenously Roehr reports four cases of diphtheria occurring in nurslings, the disease having been contracted from the mother

28—See abstract in THE JOURNAL, March 16, 1907, page 969

Cleveland Medical Journal

March

29 *Early Diagnosis of Gastric Cancer W G Thompson New York.
30 *Study of One Hundred Cases of Laparotomy H H Drysdale Cleveland
31 *Mediastinal Tumor M J Lichty Cleveland
32 *Immediate Results of Conservative Operations on Tubes and Ovaries H Lobb Cleveland
33 *Direct Transfusion of Blood C Crile

34 Foreign Body in Right Bronchus Removed by Aid of Bronchoscope. S H Large, Cleveland
35 Foreign Body in Esophagus Removed by Aid of Esophagoscope S H Large Cleveland

29 **Early Diagnosis of Gastric Cancer**—Thompson summarizes the conditions which combine to make operation not only justifiable, but desirable, as follows 1 The patient's age should be within the average cancer developing period, for gastric cases, i e, between 40 and 65 years 2 There should be a rapid and decided loss of weight and strength, without other assignable cause, such as chronic gastric catarrh, neurasthenia, mental strain or worry, or chronic general disease, such as diabetes 3 There should be evidence of some degree of stagnation of food contents in the stomach 4 There should be failure to improve in marked degree under treatment, after a few weeks' trial. With these four conditions fulfilled, exploration should be seriously considered, despite the absence of gastric pain or other marked gastric symptoms 5 A leucocytosis of from 12,000 to 16,000 with polynucleosis and a moderate secondary anemia, with low color index 6 Decided dilatation of the stomach With these two additional factors, operation is distinctly indicated 7 Occasional attacks of vomiting, often without definite relation to food ingestion 8 Occult or visible blood in the vomitus or stools 9 Epigastric or right hypogastric rigidity and tenderness on deep pressure The demonstration of hypoacidity or anacidity and the so called carcinomatous cachexia are often wanting as early definite appearances, and are not always reliable

30 **Paresis.**—Drysdale presents a complete study of 100 cases of paresis It is evident that no two cases present the same clinical phenomena and that there does not exist during the developmental period any symptom that might be considered pathognomonic

31 **Mediastinal Tumor**—In the case reported by Lichty, the orthopnea the cyanosis, and the edema of the arms, face and neck, were in marked contrast to the pallor and emaciation of the other parts of the body The skin on the entire body was rather mottled or purpuric, if not copper colored It was easily irritated, so that the patient was tempted to scratch it constantly The diagnosis was somewhat in doubt, although the conviction began to grow as the patient was failing rapidly in strength that sarcoma was the most probable cause of the trouble At the necrospy there was found a large tumor, weighing perhaps one or two pounds, occupying all of the superior mediastinum, surrounding and compressing the afferent and efferent vessels of the heart and both bronchi Microscopically, the specimen had the appearance of a round celled sarcoma

32.—See abstract in THE JOURNAL, March 23, 1907, page 1064

33 **Direct Transfusion of Blood**—Crile reports the results of his observations on the feasibility of direct transfusion of blood in pernicious anemia, leukemia, carcinoma, chronic suppuration, tuberculosis, pathologic hemorrhage accompanying jaundice, chronic hemorrhage from the bowel, surgical shock and a number of other conditions The therapeutic results are grouped into three classes positive, negative and undetermined Among the positive results is transfusion in acute hemorrhage, which is apparently final In pathologic hemorrhage it has proved positive in improving the patient's immediate condition, and in most instances wholly controlled the hemorrhage itself In shock its value seems far greater than any other remedy which he has hitherto employed From the experimental standpoint it seems to be the most effective treatment of illuminating gas poisoning Among the negative results are transfusion in pernicious anemia, leukemia, carcinoma strychnin poisoning and diphtheria toxemia Among the undetermined results may be mentioned chronic suppuration with its attendant debility and anemia, tuberculosis and the acute self limited infectious diseases

Of the seventeen clinical cases, all were technically successful In every instance the donee experienced a heightened vitality and in the absence of serious organic disease the patient became buoyant even jocose Some had chills during transfusion or soon after and a majority showed some febrile reaction later In the case of serious disease, such as suppuration, pernicious anemia, leukemia, the improvement in the blood picture was not maintained, as in patients having no serious disease or infection Preliminary notes on this subject were published in THE JOURNAL, July 21, 1906, page 189, and Nov 3, 1906, page 1482

Colorado Medicine, Denver
March

36 *Hemorrhagic Pancreatitis O P Johnstone Boulder
37 Treatment of Neurasthenia B Oettinger Denver
38 *Bradycardia in Appendicitis. M Kahn, Leadville

36 **Hemorrhagic Pancreatitis**—Johnstone reports four cases of hemorrhagic pancreatitis in which the common bile duct and the pancreatic ducts had separate openings All the cases terminated fatally and a complete postmortem was made in each case

38—This article appeared in THE JOURNAL, Dec 15, 1906, page 2011

New York State Journal of Medicine, Brooklyn.
March

39 *Vulvovaginitis in Children J R Goffe New York
40 *Scratching as a Factor in the Etiology Symptomatology and Treatment of Skin Diseases E W Ruggles Rochester
41 *Radical Treatment of Middle-Ear Caries G F Cott, Buffalo
42 *Pronation of Foot. J M. Berry Troy
43 Typhoid What Are We Going to Do About It S H Adams New York.
44 Medical Charities of Manhattan and The Bronx. F L Lattimore, Philadelphia
45 History of the Medical Society of the State of New York. J J Walsh New York

39 **Vulvovaginitis in Children.**—Goffe reviews this subject generally, and urges a campaign of education to prevent the occurrence of this condition

40 **Scratching in Skin Diseases**—Ruggles comments on the rôle played by scratching in the production and continuance of skin diseases, and urges that to treat such cases successfully it is necessary to employ measures which will take the patient's mind away from the desire to scratch That is, abstinence from scratching is the real therapeutic measure, without it the skin disease will persist indefinitely

41 **Radical Treatment of Middle Ear Caries**—Cott urges the institution of radical treatment of caries of the middle ear, and presents a résumé of 62 cases

42 **Pronation of Foot**—Berry calls attention to the fact that pronated foot is the first stage of a progressive weakness and deformity, that it is often overlooked or neglected, and that it can readily be relieved by proper treatment It is necessary, first, to correct the tendency to deformity, and second, to strengthen the foot, thus curing the tendency to deformity The use of a brace and a well selected course of gymnastics are the means employed in the treatment

Yale Medical Journal, New Haven
March

46 *Influence of Flesh Eating on Endurance I Fisher New Haven
47 Lumbar Lordosis M. S Marcy, Peoria Ill.
48 *Liquid Air in Dermatology J D Gold, Bridgeport, Conn

46 **Influence of Flesh Eating on Endurance**—Fisher's experiments indicated that the users of low proteid and non flesh dietaries have far greater endurance than those who are accustomed to the ordinary American diet Of the three groups compared, the large flesh eaters showed far less endurance than the abstainers, even when the latter were leading sedentary lives

48 **Liquid Air in Dermatology**—Gold says that there is no doubt that liquid air is of decided benefit and that a cure with superior cosmetic effects in pigmented nevi, warts and vascular nevi may be affected with less pain and fewer applications than with caustics or electrolysis In epithelioma it is of doubtful use. In lupus erythematosus the results obtained have been so encouraging, he states, as to warrant a further trial of the agent

Texas State Journal of Medicine, Fort Worth
March

49 Physical Examination of Railway Employés J T Moore Galveston
50 *Intussusception W W Lynch Midland
51 Traumatic Affections of the Crystalline Lens J O McReynolds Dallas

52 *Value of Gastric Analysis in Treatment of Indigestion W G Cook Fort Worth
53 *Use of Oxychlorid of Copper by Cataphoresis in Treatment of Granulated Lids W B Anderson Brownwood
54 *Case of Hydropyonephrosis Which Required Both Nephrotomy and Nephrectomy H A. Barr and L. Goldstein Beaumont
55 Resection of Knee Joint With Reports of Cases F Paschal San Antonio
56 Collargolum I L. Van Zandt, Fort Worth.
57 Ideal Cholecystotomy J H Smart Dallas
58 President's Address of Dallas County Medical Society A. W Carnes Hutchins

50 **Intussusception**—Lynch reports a case of intussusception which illustrates the difficulty of making a correct diagnosis at an hour sufficiently early to overcome a fatal issue He concludes his paper as follows 1 In some cases of intussusception pathognomonic signs may not appear until it is too late for a successful result through laparotomy 2 A laparotomy would be easy if done in the early hours of the disease, before much swelling occurs, adhesions form, or the bowel becomes gangrenous, and that the risk could not be much greater than in an ordinary laparotomy under the same aseptic precautions 3 Forty eight hours, or even twenty four hours, can not with safety be set as a time limit for the beginning of a radical procedure in the face of an improvement, or the failure of relief by other means 4 The excessively high mortality in intussusception is due, in most part to late surgical interference 5 Only low invaginations are likely to be reduced by hydrostatic pressure, and it should only be tried in the very early hours of the disease, and in some invaginations, especially high ones, it may be misleading and harmful in that class of cases in which improvement is apparent, and a second paroxysm is certain if reduction is incomplete 6 All patients with intussusception should be operated on in the first twelve or sixteen hours of the disease when a diagnosis is possible, and it is not certain that reduction has been accomplished by other means 7 In any form of obstruction, except fecal impaction, when there is a doubt in diagnosis, an exploratory laparotomy should be advised 8 In proper hands and with the proper technic an early exploration in the acute obstructions would increase the chances of recovery in all these conditions (except fecal impactions), and reduce the mortality of intussusception to a minimum

52 **Value of Gastric Analysis**—Cook says that together with the history, symptoms and physical examination, gastric analysis gives additional information by which we are able to make clear the clinical picture, place the case in its proper class and institute a logical and rational method of treatment

53 **Oxychlorid of Copper by Cataphoresis**—Anderson uses this agent in the treatment of granulated lids in lieu of the sulphate of copper pencil The oxychlorid is liberated by electrolysis in the application to the reverted lid of a copper electrode It shortens the time of treatment, there is not much loss of epithelium, the intervals between treatments may be greater and the results are more permanent than from the use of the sulphate

54 **Nephrotomy and Nephrectomy**—The patient whose case is reported by Barr and Goldstein is alive and well, eighteen months after the operation

University of Pennsylvania Medical Bulletin
February

59 The Making of a Museum of Applied Anatomy G G Davis Philadelphia
60 *Comparative Antiseptic Power of Salicylic Acid and Its Salts H C Wood Jr Philadelphia
61 *Studies from the Bacteriologic Laboratory H Fox, Philadelphia.
62 *Effect of Light on the Development and Staining of Ova in Eosin Solutions L. P Shippen

60 **Antiseptic Power of Salicylic Acid**—Wood found that although both the air bacteria and the pure culture of colon bacilli were destroyed after one minute's exposure to a 0 5 per cent solution of salicylic acid, a 2 per cent solution of sodium salicylate was ineffectual even after two minutes' exposure Strontium salicylate gave the same results as did sodium salicylate The neutralization of benzoic acid gave the same results as salicylic acid A 1 per cent solution of sodium salicylate prevented the development of micro organisms

61 **Studies from Bacteriologic Laboratory**—Fox records some observations made on three members of the Bacterium mucosus capsulatus group, and publishes a brief note on the effect of toxin and antitoxin injections on the phagocytosis of diphtheria bacilli

62 **Effect of Light on Ova.**—Shippen summarizes his findings as follows 1 Eosin inhibits the development of ova and injures the motility of gastrulæ and blastulæ, and in time kills them 2 Light has an additional injurious effect on the development of ova and the motility of larvæ in eosin solutions and shortens the life of the blastulæ and gastrulæ 3 Certain parts of living organisms can be stained by eosin It is very probable that the cells of living organisms which take up eosin are dead or dying Eosin enables us therefore to recognize dead or dying cells in living organisms It is, furthermore, of interest that cells which take up eosin may be entirely surrounded by a layer of living cells

Journal of Infectious Diseases, Chicago
April

63 A Spirochete in Primary and Transplanted Carcinoma of the Breast in Mice H R Gaylord Buffalo N Y
64 A Spirochete in Mouse Cancer G N Calkins, Buffalo
65 *Purpura Hemorrhagica with Generalized Infection with Bacillus Paratyphosus E. R LeCount and A. J Batty Chicago
66 *Systemic Blastomycosis. E R LeCount and J Myers Chicago
67 Comparative Study of Four Strains of Organisms Isolated from Four Cases of Generalized Blastomycosis W W Hamburger Chicago
68 *Diphtheria H Albert Iowa City Iowa
69 The So-called Physical Chemistry of Hemolytic Serum W H Manwaring Indianapolis Ind
70 *Trypanosomes of Mosquitoes and Other Insects. F G Novy W J MacNeal and H N Torrey Ann Arbor
71 *Study of the Nature of Streptolysin G F Ruediger Chicago
72 *Substitute for Potato as a Culture Medium F G Heinemann Chicago

65 **Purpura Hemorrhagica**—LeCount and Batty describe the clinical, bacteriologic and anatomic findings in a remarkable case of infection with the paratyphoid bacillus in a woman of 36 The clinical course appears to have run over a period of about two months A prominent clinical feature was the appearance of bluish and purple blotches on various parts of the body The autopsy showed hyperplasia of the intestinal lymph structures, mesenteric, retroaortic and iliac lymph glands and of the spleen, hemorrhages in the urinary tract, and in the kidneys large gray and grayish red areas especially in the cortex and about the bases of the pyramids The bacteriologic examination resulted in the isolation of a paratyphoid bacillus The areas in the kidney and the swelling of the lymphoid structures were found to be due to an accumulation of large endothelial cells, often with more than one nucleus Accumulations of these cells were also found in various other organs The process in the kidney resembled the acute interstitial nephritis that occurs in scarlet fever but did not show the plasma cells characteristic of the latter

66 **Systemic Blastomycosis**—LeCount and Myers describe the termination and the postmortem findings of the case of systemic blastomycosis reported by Eisendrath and Ormsby in THE JOURNAL A M A, Oct 7, 1905, p 1045 This case concerns a man of 33, presenting the symptoms of generalized blastomycosis, with most pronounced localization in the skin subcutaneous tissue and lungs, and in whom there developed after some time, a gibbus opposite the fourth dorsal vertebra with subsequent paralysis, death occurring two years and a half from the onset After death there was found a blastomycotic bronchopneumonia, blastomycosis of the peribronchial lymph nodes, the pleura retropharyngeal tissue liver kidneys, colon, dorsal vertebræ spinal dura and cerebellum elbow, knee and ankle joints, and also of the skin and subcutaneous tissue in which there were ulceration fistulæ and scars In the cerebellum there was a conglomerate blastomycotic nodule in which the organisms present in large numbers in all the lesions appeared to be reproducing themselves by sporulation So far sporulation has been regarded as not taking place in the tissues in blastomycosis which differs in this respect from the coccidial disease of California, an outstanding feature of which is the large number of sporulating fungi in the tissues In this case there was also a definite blastomycotic focus in a peribronchial lymph gland The colon was the seat of certain remarkable nodules which the authors regard as blastomycotic in spite of the failure to find in them blastomycete The case shows that as the

observations of systemic blastomycosis multiply, new anatomic localizations and other features are constantly being added to those previously recorded

68 **Diphtheria**—Albert's article deals with statistics and is not readily abstracted It will, however, interest health officers, because it describes the method of the Iowa State Board of Health in dealing with the diagnosis and quarantine of diphtheria

70 **Trypanosomes.**—This is an extensive study of the occurrence of trypanosomes in mosquitoes and other biting insects, the results being of great value in the study of the rôle of these insects as harborers of diseases due to flagellates

71 **Streptolysin**—Ruediger here presents additional facts concerning the nature of streptolysin, the complex substance produced by streptococci and able to cause laking of red corpuscles, extending the observations previously made by him He shows that it is intimately associated with the globulins, from which it has not been separated Various normal sera have marked antistreptolytic properties, but attempts to produce a specific antistreptolysin did not succeed

72 **Substitute for Potato as Culture Medium**—Heinemann's artificial potato medium is made as follows Fifteen grams of agar are dissolved by heat in about 600 c c. of water To this is added 200 c c of a watery solution of

Asparagin	5 grams
Dipotassium hydrogen phosphate	2 grams
Disodium hydrogen phosphate	2 grams
Magnesium sulphate	2 grams
Calcium chlorid	2 grams
Ammonium lactate	2 grams

Ten grams of peptone are then added and the mixture filtered after the reaction has been made neutral with phenolphthalein To this solution is added 30 grams of washed starch in suspension and the mixture heated to near the boiling point The total should weigh 1,000 grams The medium is now tubed, sterilized in the autoclave for five minutes at 120 C, and cooled in a slanting position The advantages of this medium over ordinary potato are Constant composition, adjustable reaction to suit various purposes, presence of starch and other substances found in potato in highly assimilable form

International Clinics, Philadelphia

73 Psychic Treatment of Some of the Functional Neuroses I H Barker Baltimore
74 Recent Advances in Prevention and Cure of Tuberculosis I P Gay Hathorne, Mass
75 Diagnosis and Treatment of Gastric Ulcer D Somerville London England
76 Treatment of Functional Heart Disease J J Walsh New York
77 Clinical Diagnosis of Enlargement of the Thymus A S Warthin Ann Arbor
78 Functional Capacity of the Heart. G W Norris Philadelphia
79 Exhaustion and Toxemia as Underlying Factors in the Production of Neurasthenia, Hysteria and Delirium T Diller Pittsburg Pa
80 Report of Two Months Service at Bellevue Hospital F S Dennis New York City
81 Neurotic Affections of the Joints C A Morton Bristol England
82 A Surgical Clinic. N Senn Chicago
83 Opening of the Pleural Cavity Without Pneumothorax T Tuffier Paris France
84 Disorders of the Umbilicus with Special Reference to the Newborn and the Infant Umbilical Infections A E Gallant New York City
86 Intraocular Angiosclerosis and Its Prognostic and Diagnostic Significance. G E. de Schweinitz Philadelphia
87 Hysterical Mutism G Hudson Makuen Philadelphia
88 Treatment. A A Stevens Philadelphia
89 Medicine D L Edsall and V Nisbet Philadelphia
90 Surgery J C Bloodgood Baltimore

Journal of the South Carolina Medical Association, Greenville

March

91 Postoperative Catharsis A B Knowlton Columbia
92 Pathology and Therapy of Gallstones J A Hayne Greenville
93 Appendicitis C R Dean Spartanburg
94 Use of Ergot in Labor J H Allen Spartanburg
95 Management of Typhoid S F Blakely Ora

The Military Surgeon, Carlisle, Pa

April

96 Some Phases of Army Recruiting Work H I Raymond U S A. Columbus Barracks Ohio
97 Recent Views on Work of Medical Department in Naval Warfare J C Wise U S N
98 Economical Plan for Consumptive Sanatorium with Description of New Tent House P M Carrington and J R Thomas U S P H & M H Service
99 Case of Circumcision by a Dog Bite C R Browne Falmouth England.
100 Surgery at the First Aid Stations H Nimier French Army
101 Medical Phases of the Maneuvers of the Ohio National Guard in 1906 E C Brush, O N G
102 Sanitary Scuttle-butt M F Gates, U S N

FOREIGN

Titles marked with an asterisk (*) are abstracted below Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest

British Medical Journal, London

April 13

1 *Surgical Forms of Ileocecal Tuberculosis. H Hartman, Paris.
2 *Treatment of Surgical Tuberculosis F J Steward
3 *Vaccine Treatment of Tuberculosis in Children C Riviere
4 *Influence of Antituberculosis Serum on the Opsonic Index W C Bosanquet and R E French.
5 Relative Opsonic Power of the Mother's Blood Serum and Milk E Turton and R Appleton

1 **Ileocecal Tuberculosis.**—Hartmann is of the opinion that this form of tuberculosis occurs more frequently than is generally recognized, and that, moreover, when suitable treatment is followed, patients thought to be incurable may be cured Hartmann has made seven resections for tuberculous disease, with only one fatality, and that occurred before 1900 In the hyperplastic form of cecal tuberculosis he advises resection In the enteroperitoneal form, or when with a hyperplastic tuberculosis there is an extensive mass of adhesions, he says that the exclusion of the disease is indicated Usually unilateral exclusion is sufficient Hartmann reviews 229 cases reported in the literature

2 **Treatment of Surgical Tuberculosis.**—At the conclusion of this paper, which deals with the subject in the usual manner, Steward reports a case of tuberculous disease of the right kidney and the bladder, in which all the usual methods were tried, without any sign of arresting the progress of the disease, and in which under treatment with tuberculin, apparently complete cure took place

3 **Vaccine Treatment of Tuberculosis**—Riviere has treated a number of cases of tuberculosis, such as tuberculous dactylitis, superficial abscess, tuberculous glands, tuberculous joint disease, psoas abscess, abdominal tuberculosis and phthisis, with tuberculin under opsonic determination He believes that tuberculin is a most valuable remedy for such patients, especially if nutrition is not greatly impaired With proper dosage a steady improvement occurs both in the local conditions and in the general health Even the secondary infection lessens severity He urges, however, that the treatment should be undertaken by none except those who have given it special study

4 **Influence of Antituberculous Serum on Opsonic Index**—From an analysis of five cases, Bosanquet and French conclude that a series of daily doses of Marmorek's antituberculous serum will, when administered by rectum, usually produce a rise in the tuberculo opsonic index This rise begins after the first three or four doses and soon reaches a maximum, close to which the index remains for three or four weeks, while serum is being given, and does not fall till nearly a week after injections have been omitted This rise in the opsonic index is coincident in some cases with an improvement in the general condition of the patient and a diminution of the diurnal variation of the temperature Subcutaneous injections of the serum do not seem to have such a good effect

The Lancet, London

April 13

6 *Increase of Insanity G H Savage.
7 Pathology of Melanotic Growths in Relation to Their Operative Treatment W S Handley
8 Notes on 130 Consecutive Extractions of Cataract Without a Failure C Higgens
9 *Successful Treatment of Tuberculosis and Leprosy S I Wernich
10 Five Cases of Inguinal Bubo G H Colt
11 Treatment of Prostatic Congestion by Electric Methods T S Bolton
12 Roentgen Rays in the Treatment of Ulcerative Blepharitis T L Bunting
13 Case of Turpentine Poisoning G H Coltart

6—See abstract in THE JOURNAL, April 27, 1907, page 1463

9 **Treatment of Tuberculosis and Leprosy**—Wernich publishes a preliminary note on the successful treatment of tuberculosis and leprosy by means of an albuminoid metabolic product, chemically altered, of a bacillus, discovered at Boshof,

Orange River Colony, in 1898, as a practically pure growth in an infusion of an herb that was suspected to contain an alkaloid Thus far three classes of cases have been treated successfully, tuberculosis of the lungs and glands in the neck, tuberculosis of the skin, and leprosy The material is administered by the mouth, air dried and pulverized, when the stomach is empty, and usually with a little sodium bicarbonate The method of obtaining the powder used is described in full The paper is to be continued in the next issue

Journal of Tropical Medicine and Hygiene, London.

April 1

14 Differential Leucocyte Count with Special Reference to Dengue Fever A. Balfour
15 *Onyalai a Disease of Central Africa A Y Massey

15 **Onyalai.**—This is a disease that occurs among the blacks of Central Africa, and thus far has not been seen in the white race The face usually is swollen and painful and there is bleeding from the mouth Situated in the hard palate and buccal mucous membranes are vesicles distended with blood, ranging from a quarter to a half inch in diameter Usually, also, there is hematuria The disease is regarded by the natives as very fatal, but Massey has treated a number of these patients with bicarbonate of soda in large doses, 40 grains, twice a day, and no fatalities have occurred

Indian Medical Gazette, Calcutta

March

16 Cerebrospinal Meningitis E H Brown.
17 Case of Typho-malarial Fever C A Gill
18 High Rate of Infantile Mortality in the Chingleput District J C Marsden.
19 Albumosuria and Duration of Albuminuria in Cholera U N Brahmachari
20 Rheumatism R P Banerjee
21 Unusual Cases of Ovarian Cyst. N J Wanless
22 Transplantation of the Cornea E J O Meara
23 Aneurism of the Common Carotid Artery O St J Moses
24 Extraperitoneal Transplantation of Ureters into the Rectum V T Armugam

Glasgow Medical Journal

April

25 *Histologic Diagnosis of Endotheliomata W S Lazarus Barlow
26 *Blue Pigmentation of the Tympanic Membrane J K Love
27 Two Cases of Eye Injury Caused by Burning Result of Operative and Other Treatment J Rowan
28 Value of Tuberculo-Opsonic Index in Diagnosis E T Fraser
29 Two Cases of Strangulated Ovarian Tumor with Symptoms Suggestive of Other Conditions J Weir

25 **Endothelioma**—During a period of four years Lazarus Barlow examined microscopically a large number of malignant tumors, of which endothelioma consituted 8 per cent of the malignant diseases of the tongue, 10 per cent of the uterus, 10 per cent of the breast, 10 per cent of the liver and bile passages, and 7 per cent of the malignant diseases primarily affecting bone

26 **Blue Pigmentation of Tympanic Membrane**—Love has seen half a dozen cases in which the tympanic membrane was discolored in the manner so often seen when gunpowder is ingrained into the skin as the result of an explosion This pigmentation was associated with deafness or tinnitus, and with thickening or alteration in the curve of the drum membrane The pigment was on the inner side of the membrane and therefore, must have reached it through the Eustachian tube

Dublin Journal of Medical Science

April

30 Our Debt to Ireland in the Study of the Circulation G A Gibson
31 Current Theories of Aphasia F C Purser
32 Color Vision. J C Pretorius

British Journal of Children's Diseases, London

March

33 *Protection of Rheumatic Children C O Hawthorne
34 Ancient and Modern Methods of Treating Infantile Diarrhea W Lauzun Brown
35 *Occurrence of Goiter in Parent and Child E Jones

33 **Protection of Rheumatic Children**—According to Hawthorne, the one influence on which we can depend for the prevention of heart disease in rheumatism is absolute rest so long as the rheumatic poison shows signs of activity

35 **Goiter in Parent and Child**—The child, in the cases reported by Jones, did not present any evidence of goiter until she was nearly 6 years of age, when the mother noticed a fulness in the neck that had increased fairly rapidly at first and then more slowly Except that there was no pulsation the tumor was identical with the goiter of exophthalmic goiter Under treatment with thyroid extract, the tumor began to shrink, until after about ten weeks, the thyroid became of about normal size, and it has remained so ever since No other treatment was employed, beyond attending to the general hygiene of the patient The mother of this patient had had a goitrous swelling, evidently an adenoma, for about eight years

Gazette des Maladies Infantiles et d'Obstétrique, Paris

36 (IX Nos 1-4 pp 1 32) Efficacy of Caffein in Choreiform Crises in a Child. (Crises chor calmées par la caféine) Variot
37 *Incipient Epilepsy in Children (Epilepsie chez les enfants) Nageotte
38 *Dangers of Lack of Sufficient Food for Infants (Inanition chez les nourrissons.) Variot
39 *Hypnosis for Onanism in Children (Onanisme) Régis
40 * Antiseptic Measures After Delivery (Soins antisept après l accouchement) J Lucas Championnière
41 *Training of School Children in Preventive Antisepsis of the Nose and Throat (Utilité de l antisepsie préventive) Weber
42 Hyperostosis of Lower End of Humerus as Cause of Ankylosis of Elbow (Ankyloses du coude) G Berne
43 (Nos 5 6 pp 33-48) *Intermittent Albuminuria (Albuminuries intermittentes) H Gillet
44 *Epistaxis the Clue to a Particularly Insidious Form of Hemorrhagic Purpura. (Maladie de Werlhof) F Escat
45 Treatment of Influenza in Children (Grippe chez l enfant) H Gillet

37 **Epilepsy in Children**—Nageotte describes various manifestations of incipient epilepsy in children They were observed almost invariably after some severe acute infection which had evidently induced a slight encephalitis The majority of such children recover completely in time A child may become an idiot or may present hemichorea after an attack of whooping cough, and this masked epilepsy belongs in this same category In one case a child of 5 seemed frequently startled Whatever she was doing she stopped at times for a moment and then went on No one noticed this at the time, but gradually epileptic seizures followed They yielded to doses up to 2 gm (grains xxx) of bromids, and the child is now well She had previously passed through several infectious diseases Another child, a girl, had suffered from enteritis and scarlet fever and it was noticed that she grew absent minded at times in her play An epileptic seizure gave the alarm, and recovery was soon complete under the bromids In this child the knee jerk was absent but she was unusually intelligent A third type of incipient epilepsy assumes the form of spells of anger the child throws himself on the ground, the eyes open In one such case by the end of a week the eyes had a haggard expression and an epileptic seizure occurred This type, Nageotte states, also subsides as a rule under the bromids There is no loss of consciousness in these early manifestations of epilepsy, the trouble being more choreiform in character The fact that the tongue is not bitten does not exclude epilepsy Incontinence of urine at night may be an accident, but more often it is a nocturnal seizure Comby believes that essential epilepsy is very rare, as a rule, the trouble can be traced to some preceding acute infection

38 **Dangers of Insufficient Nourishment for Infants**—Variot asserts that an infant should take one seventh of its weight as its daily ration during the first few months As there is not much difference in the amount of calories in human and cow's milk, the amount of each should be about the same Defectively developed infants require even more food than the healthy in proportion He has made a practice of watching the development of infants on a certain ration and has thus established the average ration of one seventh of the weight With less than this the infant suffers from insufficient nourishment In one case an infant vomited and was losing weight The mother had very little milk He gave the child sodium citrate to stop the vomiting and doubled the amount of milk going from 300 to 600 gm (9 to 18 ounces), and the child began to thrive at once Loss of weight and vomiting are among the signs of insufficient nourishment but this subject of inanition in infants has not yet received the attention it deserves

39 **Hypnotism in Treatment of Onanism i[illegible] hildren**—Régis relates 2 cases in children of 6 [illegible] ed to alm

incessant masturbation for 2 or more years After failure of all other measures, perseveringly applied, suggestion under hypnosis cured the younger child, a girl, but the boy resisted even this Mechanical measures had been tried by the parents for a long time, and Régis thinks that these are directly injurious, accentuating the tendency and rendering it more chronic.

40 **Antisepsis After Accouchement.**—Lucas Championnière orders that the vulva should be bathed with a hot and strong solution of 50 gm (ʒiss) carbolic acid, with the same amount of glycerin, in a liter of boiled water In case of any excoriation the following salve is applied 100 gm (ʒiii) vaselin, 10 gm (ʒiss) boric acid, and 1 gm (15 grains) balsam of Peru The vulva is then covered with a compress dipped in a weak solution of carbolic acid, and wrung nearly dry The toilet is repeated morning and evening with this hot, weak carbolic acid solution except in case of severe vulvar lesions, when a small quantity of a stronger solution can be used.

41 **Systematic Preventive Antisepsis for School Children**—Weber states that for some time he has been applying the principle of preventive antisepsis of the nose and mouth as a routine measure in his private practice He here advocates it on a large scale for children in school, saying that the benefits in private practice have been established beyond discussion He reviews the arguments in favor of the assumption that all the acute eruptive fevers are essentially a lymphangitis Glandular affections in the neck can often be traced to an apparently insignificant follicular tonsillitis, and the mouth of Stenson's duct shows a reddish circle in case of mumps, resembling the aspect of a stitch hole abscess, and having the same significance "How frequently," he remarks, "do we observe an ordinary cold develop, then comes sore throat, followed by a tracheo bronchitis and, later, a tuberculous process in the lung" "Daily antisepsis of the upper air passages may ward off all these bacillary infections" He, therefore, urges study of the most practical means to accomplish this end, suggesting that great benefit would certainly follow if school children were trained to wash their hands with soap before taking their places in school, as the hands are the usual vehicle of the "living dust" Each child should also be trained to introduce into each nostril a small amount of some antiseptic salve, and also to gargle with some good antiseptic or to suck an antiseptic tablet, possibly with sulphur for the base

43 **Intermittent Albuminuria**—Gillet discusses the albuminuria observed without other signs of nephritis It may be the result of some lesion in the kidney, but the prognosis, he states, is essentially favorable The absence of tube casts and of arterial hypertension is a special feature of this form of albuminuria The unimpaired permeability of the kidney and the arterial hypotension are prominent characteristics of this form, as likewise, although less important, the orthostatic and intermittent character of the albuminuria

44 **Epistaxis as First Sign of Hemorrhagic Purpura.**—Escat describes 4 cases of hemorrhagic purpura which developed with a peculiarly insidious chronic and latent course, recurring epistaxis being the only sign to attract attention This should always compel examination of the body of a child in search for ecchymoses, as the purpura is liable to develop unsuspected In the cases of death from recurring epistaxis on record, many of the children may have been affected with this unsuspected form of this disease In one of the 4 cases described the patient was a lad of 15 who had had severe epistaxis several times a day for a month The physician had tamponed the nose and a rhinologist had cauterized the nasal mucosa, but no one had made a general examination Escat found the body covered with "bruises" as the boy called the numerous ecchymoses observed for several weeks He was small for his age and intensely anemic, the skin was shiny, with a grayish pallor and greenish reflections but the boy had no fever or other general symptoms Long cotton wicks, dipped in 1/5 000 adrenalin were inserted in each nostril and renewed every 12 hours, while 2 gm (30 grains) of calcium chlorid was given internally The patient soon recovered under this treatment The history of another case in a girl of 10 was about the same The third patient was a child of 3, and epistaxis had recurred two or three times every day, as a rule, during 15 months The petechiæ observed occasionally were attributed by the parents to bruises The fourth patient was a child of 6 with recurring severe epistaxis, the mother stated that for three years she had noticed a tendency to extensive ecchymosis on the slightest contusions The child had an extraordinary appetite, and the mother stated that during her childhood she had been subject to the same tendency to ecchymosis on the slightest provocation Escat suggests that the chronic character of the purpura in these cases seems to show a close connection between hemorrhagic purpura and hemophilia Further research will throw light on the question, especially if greater attention is paid to the latent and "walking" forms of hemorrhagic purpura Rhinologists, especially, should be on the alert to detect it when consulted for recurring epistaxis

Presse Médicale, Paris

46 (XV No 22 pp 169 184) Legislation in Regard to Reform of Medical Education (Documents officiels)
47 Technic of Total Vulvo-perineal Colpo hysterectomy (Op de Schuchardt Schauta) R Proust
48 Clinical Examination of Scapular Region (Régions scap) P Desfosses.
49 Mercurial Stomatitis (Stom merc.) M Letulle.
50 (No 23 pp 185-192) *Cancer of the Pancreas and Diabetes (Cancer massif du pancréas et diab) A Brault and P Ameuille
51 *Electric Ionization in Sclerosis and Ankylosis (Sclérolyse ionique) P Desfosses and A Martinet.
52 Cause of Error in Tests for Albumin (Recherche de l albumine.) L Deval
53 (No 24 pp 193 200) Surgical Treatment of Fractures of Lower End of Humerus (Fract de l extrémité inf de l humérus.) J Huchet.
54 Prophylaxis of Intestinal Trouble in Infants (Elévage au biberon) P Londe.
55 Diet in Measles (Régime dans la rougeole) L Ramus
56 (No 25 pp 201 208) Medical Notes from the Battle of Mukden (Guerre Russo-Jap) J J Matignon
57 Intoxication from Sodium Salicylate in Children (Intox par le salicylate de soude) A Martinet

50 **Cancer of the Pancreas and Diabetes**—Brault reports a case in which the diagnosis wavered between total cancerous degeneration of the pancreas with symptomatic glycosuria, and cancer with coexisting or preceding diabetes Autopsy showed that the first assumption was probably correct. The amount of sugar in the urine ranged from 115 gm to 340 gm, but averaged 150 gm toward the last, finally subsiding gradually to zero just before death The patient was a hearty eater, and this is the probable explanation of the glycosuria observed.

51 **Ionization in Treatment of Ankylosis and Sclerosis.**—Desfosses has had much success in the treatment of ankylosed joints by means of electric ionization His experience confirms that of other workers in this line, demonstrating the superiority of the method to massage and other measures in respect to the resolution of ankyloses The most efficient substances to date in his experience have been a 2 per cent solution of sodium chlorid or sodium salicylate The best results have been obtained with electrodes covering a space of 100 or 200 sq cm with a current ranging from 50 to 80 milliamperes, and the sitting lasting for half an hour to an hour The ankylosis seems to be most readily influenced when of traumatic origin, next in order come the post infectious ankyloses and last the post rheumatic. The cathode is applied to the part to be treated He adds further that cicatrices from burns are effectually influenced by ionization and that the pain of a sprain is reduced.

Archiv f Kinderheilkunde, Stuttgart

58 (XLV Nos 1 2 pp 1 160) Roentgenoscopy of Bone Affections in Infants with Inherited Syphilis (Roentgenoscopie von Knochenaffectionen) O Reinach
59 Bacteria Most Frequently Normally Encountered in Child s Mouth and the Changes Induced by Them (Bact in der Mundhöhle des Kindes) T Oshima
60 *Water Treatment of Membranous Croup (Hydriatik des Croup) J Sadger
61 (Nos 3-4 pp 161 320) *Rational Feeding of Children from Birth to Age of 2 Years (Rationelle Kinderernährung) H Klose
62 Expert Report on Milk Treated with Trypsin and Lab (Ueber Backhausmilch) Landmann
63 (Nos 5-6 pp 321-484) *Gastrointestinal Hemorrhage in the New Born (Melaena neonatorum) W P Shukowsky
64 Herpes Zoster in the Eyes of a Child (Herpes zoster ophthalmicus) J M Rachmaninow
65 *Deaths in Chorea. (Todesfälle bei Chorea) Id.
66 *Tumors in Cerebellum in Children (Kleinhirngeschwülste) T Oshima

67 Albumin Content of Infants Stools (Eiweissgehalt.) Id
68 *Functional Disturbances of the Heart in Scarlet Fever (Functions Störungen des Herzens bei Scharlach) J W Troitzky

60 **Water Treatment of Membranous Croup**—Sadger reviews the history of hydrotherapy of membranous croup, many remarkable cures having been reported by various writers, commencing with Harder in 1821 The aim seems to be to induce powerful revulsion by sudden douches with cold water, and he urges the revival of the method Winternitz believes that there is a paresis of the posterior crico arytenoid muscles which can be conquered by a powerful reflex thermic and mechanical stimulus affecting the respiration center He reports 4 cases in which this treatment was successfully applied The body was rubbed with sponges dripping with water at 10 C (50 F) for 6 minutes While this was being done the head and back of the neck were repeatedly douched with cold water from a height, with packs in the interim, until pulse and temperature were nearly or quite normal Bartels of Kiel has applied the water treatment in a number of severe cases with great benefit, as an adjuvant to intubation or tracheotomy In case the temperature is low, the child is placed in a warm bath before being given the cold douche. In the cases reported large amounts of the false membrane were coughed up and expelled through the tracheotomy opening Sadger in conclusion quotes Priessnitz' saying that "water treatment takes character" This applies to the physician as well as to the patient, and half hearted measures do more harm than good One writer reported that in 10 years of experience with water treatment all his 28 little patients with membranous croup recovered under it He repeats the douche whenever the breathing becomes difficult and the croupy cough recurs. In the severest cases, with much fever, he cools off the body by sponging before he attempts the douche The latter can then be applied without fear, he says The cold water must be douched suddenly over the head, then over the back of the neck This causes such a shock that the child takes sudden, deep inspirations and struggles. At first he repeated the douches every hour, in very severe cases, leaving the child in the water for 10 minutes during the first 2 or 3 douches After the fifth or sixth douche the child is generally so much improved that it asks for food. After each douche the child generally falls into a refreshing sleep The full details of the older writers on this subject are given *in extenso*, and Sadger adds that the re introduction of hydrotherapy in the treatment of croup will certainly increase the proportion of recoveries

61 **Rational Feeding of the Child from Birth to Two Years Old**—Klose's article won the prize presented by the Soc. Scientifique d'Hygiène Alimentaire et de l'Alimentation rationelle de l'Homme à Paris It presents in detail and in tabulated form the principles of infant feeding followed in Kohl's service at the clinic for children's diseases at Strasburg, and the results observed He compares them with those obtained elsewhere The Themhardt and Biedert mixtures are used as adjuvants to mother's milk in some cases The infant mortality at Strasburg is about 19 per cent

63 **Gastrointestinal Hemorrhage in the New Born.**—Shukowsky has observed 29 cases in his own practice. He reviews the history of t e subject and states that in 18 of his cases the hemorrhage was rapidly fatal Gelatin proved promptly successful in certain cases, but it failed completely in the cases of acute hemorrhagic gastroenteritis and of syphilitic dyscrasia Even the apparently most desperate cases may suddenly take a turn for the better Mercurial treatment is indicated on suspicion of syphilis He has witnessed recoveries under chlorid of iron, one drop in a teaspoonful of gruel, milk or sweetened water Some authorities give it every half hour, others give one fourth or one half drop in water every five minutes In one case a well developed child, free from trauma or syphilis, passed bloody stools and vomited blood The abdomen was bloated, the temperature high Gelatin was administered without effect, and lavage of the stomach was then resorted to The stomach was rinsed out with cool physiologic salt solution (54 F) three times, with a few minutes' interval The effect was astonishing in this as in a second similar case Vomiting ceased at once and the children went to sleep and did not wake for twelve or fourteen hours The stomach was rinsed out again when they woke, and the intestines were flushed with the cool salt solution at each lavage. He had been impressed with the idea of a possible gastrointestinal infection in such cases by the discovery of acute hemorrhagic enteritis in some of the children who had previously succumbed The coolness of the fluid used in the lavage has a tendency to reduce the supply of blood in the parts The remarkable promptness of the effect in both these severe cases was impressive It removed from the gastrointestinal tract the decomposing masses of blood and the bacteria and toxins contained in them The discovery of severe inflammatory gastrointestinal processes as a not infrequent finding in infants only a few days old justifies prompt lavage of the stomach and intestines in severe cases of melena in the new born Autopsy of 4 of the infants revealed extensive hemorrhages elsewhere, but none in the stomach or intestines, although a quantity of blood had been swallowed In the 14 other fatal cases, autopsy in 12 revealed syphilis, tumor formation, hemorrhagic pneumonia, or hemorrhagic inflammatory processes in the stomach and intestines Examination of the clots obtained by lavage in the 2 cases mentioned showed staphylococci and streptococci besides other micro organisms No medical measures were attempted in one of these cases beyond the lavage

65 **Two Fatal Cases of Chorea.**—The 2 patients were girls of about 12, and the disease came on abruptly, with extremely violent motor agitation, high fever with unconsciousness, hemiplegia and death in 6 and 13 days In both cases there were evidences of recent endocarditis and acute enlargement of the spleen, tending to show that death was due to some general infection Opportunity for infection was obvious in numerous erosions observed on the body The 2 cases occurred within five months of each other, and were the only fatal cases of chorea known in 175 cases of chorea observed at Moscow for many years The brain substance was soft, scattered with drops of blood, but no inflammatory focus could be detected

66 **Tumor in Cerebellum in a Child**—Oshima's patient was a girl of 6 who gradually exhibited symptoms of a tumor in the brain, pain in the back of the head, accompanied by vomiting, evening and morning, such as is frequently observed with tuberculous meningitis Loss of consciousness, disturbance in vision to actual blindness, grinding of the teeth, uncertain gait, apathy, loss of appetite and emaciation were the principal manifestations A large tubercle was found in the cerebellum, with two smaller ones in the cerebrum

68 **The Heart in Scarlet Fever and Under Serum Treatment.**—Troitzky accepts as established the theory that the heart is affected constantly in case of scarlet fever, feeling the influence of the scarlet fever sepsis or of its products from the first rise in temperature until convalescence passes into complete recovery The intensity of the epidemic and the severity of the disease do not seem to have any direct, immediate influence on the intensity of the functional disturbance Although these functional disturbances are not directly dangerous, yet in time they are liable to induce in the child's organism such deviations from the normal as to interfere decidedly with physiologic, physical and mental development The murmur at the apex and arrhythmia of various kinds are the signs of the functional disturbances most commonly observed Subcutaneous administration of serum induces abrupt changes in the sphygmographic tracings showing unmistakable changes in the action of the vascular system Only 23 of the 43 patients in his service recovered in the last epidemic The ages of the patients ranged from 9 months to 13 years In the fatal cases arrhythmia was pronounced, the pulse being highly irregular and thready The signs of congestion in the skin and mucosæ grew more and more pronounced, and the children died in coma Study of the cases with a favorable termination showed that the pulse was monocrotic, sometimes dicrotic or hyperdicrotic, the arterial pressure corresponding to the age of the child After injection of serum, the pulse was always monocrotic, irregular, uneven and the blood pressure rose a little He regards this as indicative of acute transient relaxation of the vessel walls After the serum has been absorbed the pulse returns to its previous condition, but with low waves and the blood pressure remains high

Centralblatt f Gynäkologie, Leipsic

Last indexed, page 1336

69 (XXXI No 7, pp 201 232) *Cure of Melena in a New Born Infant under Gelatin (Melaena neonatorum) G Schubert.
70 Reply to Kock s Article in No 50 on Development of Sexual Organs (Reste des Wolff'schen Ganges beim Weibe) R Meyer
71 Cysts of Gartner s Duct (Cysten des G schen Ganges) L. Tarsia
72 *Bumm s Operating Table (Op Tisch) W Liepmann
7 (No 8 pp 233 256) Decidual Reaction of Maternal Connective Tissue and Vessels in Case of Tubal Pregnancy (Deciduale Reaktion des mütt. Bindegewebes und der Gefässe) O v Franqué
74 Three Operations for Atresia of the Vagina with Cesarean Section in the Last Interval (1 Atresia vaginæ 2 künstliche Bildung der Scheide Schwangerschaft kon servativer Kaiserschnitt 3 Herstellung der Scheide sub partu) A A Muratow
75 (No 9 pp 257 280) Pyometra in the Congenitally Closed Half of a Double Uterus (Uterus duplex.) M v Holst
76 Extrauterine Pregnancy Simulating Tuberculosis of Peritoneum and Adnexa (Extra uterin Gravidität.) K Lassaud and A Wertheim
77 *Suggestion to Make an Artificial Vagina Out of Lowest Part of Ileum Still Connected with Its Mesentery but Otherwise Isolated. (Op bei völligem Mangel der Scheide) Häberlin
78 Intrauterine Cry (Intraut Kindesschrei) R Blumm
79 (No 10 pp 281 304) *Classification of Contracted Pelves and Prognosis in the Different Forms (Einteilung des engen Beckens) K. Baisch
80 *Prophylaxis and Treatment of Headache after Spinal Anesthesia (Kopfschmerz nach lumbaler An) Offergeld

69 **Gelatin Treatment of Melena in Infants**—The mother of the infant in the case reported was a primipara with moderately contracted pelvis The child, a male, was delivered with forceps after 36 hours of labor He was asphyxiated, but soon revived, and seemed to be perfectly healthy until the fourth day, when slight icterus developed, and he vomited fluid and coagulated blood twice Ten c c of a 2 per cent solution of gelatin was injected under the skin on each side of the back The child vomited blood again and passed blood in its stool and the same injection was repeated toward night The next day there was no vomiting, but the stools were blackish, and 10 c c of the gelatin solution was injected again about noon on the fifth day, after which the child developed and nursed normally During the period of melena he was kept in an incubator as his temperature was subnormal He weighed 2,770 gm at birth, and 2,860 gm by the twenty sixth day

72 **Operating Table**—Bumm's table is distinguished by its simplicity The end of the table is raised or lowered by means of an oil pump worked by a pedal The piston of the pump and a single leg at the head of the table are its only supports Its chief advantage is claimed to be that the field of operation can always be adjusted at the same level

77 **Artificial Vagina Made from Loop of Ileum.**—Häberlin discusses the present measures for making an artificial vagina in case of complete absence of a normal vagina, and describes a case in which the best efforts failed to produce a permanent vagina and in which a wife was divorced on this account As cases of the kind are rare, he urges those who have the opportunity to try a new technic which he suggests, and presents a number of arguments that theoretically establish its usefulness A recess is made in the perineum for the new vagina The abdomen is then opened and a piece of the lower part of the ileum was resected for about 15 or 20 cm. (8 or 9 inches) The intestine is then reunited. The central end of the resected portion is then sutured, the distal end is closed with a clamp, and the whole is pushed down past the bladder until it emerges in the opening in the perineum The cervix is implanted in a side opening into the resected intestine In case of total absence of the uterus the resected portion is merely drawn down into the recess made for it and is sutured to the outer opening The abdomen is then sutured and the new vagina drained In experiments on the cadaver and in other operations in the clinic, Häberlin has tested the stretching power of the mesentery of this part of the intestine, and has found that it will stand extreme traction without interference with its vitality

79 **Classification of Contracted Pelves**—Baisch writes from Döderlein's clinic to urge classification according to the size of the true conjugate diameter not according to the shape of the pelvis The size of the true conjugate is what determines the prognosis He regards 7 and 7 5 cm as the limit for a viable child at term, calling this the second degree of contracted pelvis The first degree includes all down to 8 cm and the third degree all between 7 and 5 cm The children are usually smaller with generally contracted pelvis than with flat pelvis

80 **Prophylaxis and Treatment of Headache After Spinal Anesthesia**—Offergeld has applied this method of anesthesia in 40 maternity cases, and 22 of the patients suffered from more or less severe headache afterward He found it possible to arrest the headache almost immediately by withdrawing a little of the cerebrospinal fluid by lumbar puncture This clinical experience was explained by experiments on rabbits The findings demonstrated beyond question that the headache is the result of increased pressure in the spinal canal By allowing the escape of 1 or 2 c c of the fluid before making the injection and restricting the amount of fluid injected to the minimum, it is possible, he thinks, to obviate all trouble from this source In case the headache develops, it is possible to cure it at once by lumbar puncture, thus relieving the pressure. This measure never failed in his experience, all headache vanishing in from 30 to 40 minutes at latest

Deutsche Zeitschrift f Chirurgie, Leipsic.

Last indexed page 918

81 (LXXXIII Nos 5-6 pp 401 590) Fracture of the Neck of the Femur and Healing Process (Schenkelhalsfrakturen) P Frangenheim
82 Peritonitis of Obscure Origin (Perit mit schwer erkennbarem Ausgangspunkt) R Oppenheimer
83 Isolated Fracture of Great Trochanter (Is Frakt. des Tr major) Kruger
84 *Opening Esophagus through the Neck to Remove a Foreign Body (Oesophagotomia cervicalis externa.) Naumann
85 *Cicatrix forming Action of Sections of Thyroid Gland after Suturing the Esophagus (Narbenbildende Wirkung von Schilddrüsenschnitten) D v Navratil
86 *Gastroenterostomy (Beitrag zur Gast) L Delaloye
87 Dislocation of Interarticular Fibrocartilage in Knee. (Men Luxation im Kniegelenk) Bergmann
88 Irreducible Dislocation of Knee (Irreponiblen Kniegelenksluxationen) D Ruppanner
89 Two Cases of Carcinoma of Small Intestine. (Jejunum Ileumcarcinome) J Finsterer
90 *Treatment of Fracture of Calcaneus (Fersenbeinbrüche) E Becker
91 Retroperitoneal Cysts or Gravity Abscess? (Cysten oder Senkungsabszesse?) H Minssen and Weydemann

84 **External Esophagotomy for Removal of Foreign Bodies**—Naumann adds 28 new cases to the list of 326 cases collected by Balacescu in 1903, with a further list of 12 similar operations performed in his service at Zwickau

85 **Cicatrix-Forming Action of Slices of Thyroid Gland.**—Navratil's article issues from Dollinger's clinic at Budapest, and supplements his communication of a year ago relating the remarkable action of the thyroid gland which he had sutured over an opening in the esophagus first closed with a tobacco pouch suture The upper pole of the thyroid gland was not disturbed, but the lower pole was drawn slightly to one side to fit over the sutured wound The thyroid tissue displayed such marked clinging and cicatrix forming properties in this case that he has since experimented with isolated slices of thyroid gland, and found that they are equally efficient in this respect, growing intimately into the tissues in a very short time and retaining their vitality indefinitely His experiments were made on dogs

86 **Gastroenterostomy**—Delaloye reviews the experiences with this operation at Feurer's clinic at St Gallen, a total of 117 cases The number of gastroenterostomies for cancer is growing constantly less, as the conditions are so much better after resection of the pylorus that this is preferred whenever possible The mortality after resection has been only 16 66 per cent of 42 cases, and zero in the last series of 20 The mortality of the gastroenterostomies was 25 64 per cent The cause of death was the vicious circle in 4 cases, pulmonary edema in 1, hemorrhage from gastric ulcer in 1, pneumonia in 5, peritonitis in 8, and marasmus in 10 cases The peritonitis was due in 4 instances to gaping of the wound

90 **Treatment of Fracture of the Calcaneus**—Ideal functional results are reported by Becker in a case of fracture of the calcaneus treated by repose and ice for ten days, after which the fracture was reduced by means of an elevator driven perpendicularly straight across the bone, close to its

under surface, toward the inner margin of the foot The handle of the elevator was then lowered, thus bringing the point close under the internal malleolus, where it emerged through a small incision With traction on the handle and on the point of the elevator, the fractured bone was brought into place, and while an assistant held the parts in this position Becker introduced a drill from behind, passing upward through skin and bone along the median plane of the calcaneus The exact distance had been calculated with the Roentgen rays beforehand and marked on the drill, so that it stopped just short of the extreme end of the bone, thus not emerging into the joint He left the drill quietly in place as a support for the parts and did not remove it for six weeks, when, after chiseling off a projecting piece of bone from the lower surface of the calcaneus, conditions were apparently restored to normal

Jahrbuch f Kinderheilkunde, Berlin

Last indexed page 1306

92 (LXV No 3, pp. 263 392) *Alimentary Intoxication (Intoxikation im Verlaufe der Ernährungsstörungen) H Finkelstein
93 Intestinal Putrefaction with Different Kinds of Infant Food (Darmfäulnis im Säuglingsalter) N Soldin
94 Intubation at Munich (15 Jahre Intubation) P Reich

92 Alimentary Intoxication.—Finkelstein continues his study of this subject, his previous communication was summarized in THE JOURNAL, April 13, 1907, page 1306 The evidence which he presents establishes for the first time, he says, that the food—without the cooperation of bacteria—can become an active poison in the organism He preaches that the symptoms of intoxication in the course of disturbances of nutrition are of an alimentary nature They result from the fact that a larger quantity of certain elements of the food are ingested than the organism can dispose of Fat and sugar are mainly responsible, while albumin can not be incriminated, and the participation of the salts is still a question Nothing definite, he states, is known in regard to the nature of the poisons, there are objections to the assumption of acidosis The fundamental importance of these facts for the comprehension of conditions of this kind in infants and for their treatment is beyond question, he believes The insight thus obtained into the processes in the child will be found instructive also for many questions of general pathology The symptom complex in the adult which we call autointoxication and ascribe to intestinal toxins may be due in reality to this pathologic fate of certain elements of the food in the intermediate metabolism For the first time, he continues, the long sought evidence is forthcoming that there is such a thing as "alimentary fever" He believes that careful observation of adult patients, similar to his research on infants, will reveal many important findings The food does not become a poison except when it is taken into an organism in which the metabolism is more or less morbid The indispensable prerequisite for the "intoxication" is the existence of a peculiar general insufficiency of the functions connected with nutrition This is the real trouble, while the "intoxication" is only a transient symptom He gives a number of typical tracings and clinical histories to show the importance of the therapeutic results obtained by treatment of infants on these principles The tracings show the influence of systematically planned changes in the diet The "intoxication" could be made to appear, vanish and reappear at will by changing the diet, demonstrating the unmistakable connection between the food and the syndrome observed The symptoms of intoxication appear as a regular reaction on the part of the body to certain changes in the kind and amount of the food He deplores that lack of comprehension of these principles has resulted in injury to some of the infants in his charge in former years Supposing, as he had been taught, that all febrile disturbances accompanied by serious general symptoms could be only the work of bacteria, and that the body required ample nourishment to support it in its struggle against the bacterial invasion, he plied the infants with even more food than usual, until convinced by the concurrent testimony of his tracings in numerous cases that the restriction of food or withdrawal of all food is the only route to safety His experience teaches that certain febrile conditions suggesting typhoid and cholera, are solely and exclusively dependent on alimentary influences, and can be arrested at any time by regulating the diet The intoxication results when too much food in general or too much of certain ingredients is given, beyond what the organism can assimilate These elements have an abnormal fate in the intermediate metabolism, and the "intoxication" is the result.

Zeitschrift f Geb und Gyn., Stuttgart

Last indexed page 1223

95 (LIX No 2 pp 205-384) *More Active Tendency in Obstetrics (Berechtigung einer aktiveren Richtung in der geb Ther) M Hofmeier
96 Lithopedion in a Woman of 85 (Lithopädion) J Wallart
97 Gartner's Duct Congenital Malformations and Cancer (Gartn Gang beim Menschen) R Meyer
98 *Changes in Placenta Cord and Membranes in Syphilis and Their Relations to Pale Spirochete. (Veränderungen etc bei Syph) F Mohn
99 *Adhesions in Abdominal Cavity Result of Infectious Process (Adhäsionsbildung) F Fromme
100 *Bladder Stone Obstructing Delivery (Geburtshindernis) C A Wagner

95 Tendency to More Active Obstetric Measures.—Hofmeier tabulates the results of prophylactic and active obstetric measures in his clinic and compares them with those of others In 104 cases requiring prophylactic intervention, such as forceps, version or premature delivery, 26 of the children died during delivery, but all the mothers recovered On the other hand, all but one left the maternity alive of 27 children delivered by Cesarean section, pubiotomy or symphyseotomy, but 3 of the mothers died, all otherwise healthy women in the prime of life It was found that 29 per cent of the children in this last group had died before the end of the first year He thinks that these figures speak for themselves, and that medical students will get a confused notion of obstetrics as they see that they are taught one kind of obstetrics for their practice while an entirely different kind is practiced in the clinics He believes on the whole that obstetric interventions might be more frequent, especially forceps operations, in the interests of the children But the all around benefits of more extensive operations, especially the outcome for the mother, should be well studied, not merely whether a few more dozens are to be added every year to the 2,025,847 infants born annually in the German empire, especially as only 70 per cent of the dozens thus saved live to be a year old.

98 Syphilitic Changes in Placenta, Cord and Membranes, and the Pale Spirochete.—When Mohn commenced his research on this subject two years ago the *Spirochæta pallida* had not been discovered, but its discovery explained later many of his findings The presence of the pale spirochete in more than 50 per cent of the umbilical cords examined and in almost 70 per cent of the afterbirths, confirms its specific importance he thinks The absence of nerves in the placenta shows that the spirochetes found can not be explained away as "silver stained nerve fibrils" as some have asserted in respect to other tissues The fact that the placenta and membranes are free from external infection also excludes error from this source Spirochetes were never found in the decidua nor intervillous spaces but they swarmed in the fetal villi and in the umbilical cord when the fetus exhibited signs of syphilis—not otherwise He thinks that all this shows that the fetus, and not the mother is the main source of the infection in such cases The parasites find their way into the ovum from the mother or in the spermatic fluid or pass from the mother to the fetus later They proliferate in the fetus, acquiring new virulence, and pass then into the placental circulation

99 How Adhesions Form in Abdominal Cavity—Fromme relates extensive experiments on animals injecting blood into the abdominal cavity with or without injury of the serosa and with or without the presence of germs The results demonstrated conclusively that blood and serum even with extensive defects in the serosa are unable to induce the formation of adhesions in the absence of germs But as soon as the accumulation of blood becomes infected, a circumscribed infectious process results, with more or less paralysis of the adjoining intestine and subsequent development of adhesions Accumulated blood can thus [illegible] left in [illegible] abdominal cavity without fear if it is not i[illegible] around the field of operation is always [illegible] and should [illegible]

lously removed This should be done especially in case of ruptured tubal pregnancy But it is unwise to try to remove all the blood which has settled at inaccessible parts of the abdominal cavity This would spread germs throughout the cavity and, by the longer time required, would bring new germs to the spot The trifling advantage that the body is spared the absorption of the blood would be far outweighed by the disadvantages of spreading infection to blood in remote nooks The clots, therefore, which are not in contact with the field of operation in case of a ruptured tubal pregnancy should, he states, be left undisturbed

100 **Bladder Stone Obstructing Childbirth.**—Wagner gives a skiagram of the stone in his case, and describes the details of this and 46 other cases of the kind on record Delivery was prevented by a stone in the bladder, fully 2x4x6 cm, impacted between the symphysis and the head of the child The nature of the obstruction was not recognized until after 4 days of labor, when it proved possible to reduce the stone under chloroform The child was then extracted, showing incipient maceration The patient had suffered from bladder disturbances for several months, urination at times being abruptly arrested but returning if she reclined There were also cramp like pains in the bladder region Eight years previously she had had about the same symptoms for a time, terminating with the expulsion of a bladder stone the size of a bean. The experiences related demonstrate the advisability of removing a bladder stone before a childbirth, as it is almost certain to cause severe injury of the wall of the bladder or vagina or of the sphincter during delivery, besides offering a mechanical obstacle to the childbirth The operations *sub partu* show as good results on the whole as when the stone was reduced, far better than when the delivery proceeded without regard to the stone Colpocystotomy proved most successful, especially when the bladder wall was sutured at once This should be the routine technic if it proves impossible to reduce the stone under general anesthesia

Brazil Medico, Rio de Janeiro

Last indexed XLVI page 393

101 (XIX Nos 9-15 pp 81 150) Treatment of Edema (Edemas) P Guimaraes
102 *Balsam of Peru in Treatment of Wounds (Feridas) Id
103 Hysteria (Hysteria) A Austregesilo
104 *Tropical Ulceration (Existe a Verruga do Peru no Estado do Rio Grande do Sul?) E v Bassewitz and Unna
105 Infection with Ankylostomiasis through the Skin (Infestaçao da ank pela pelle.) A Austregesilo
106 Frequency of Dermatoses Among Infants at Rio (Frequencia das dermatoses infantis) Moncorvo Filho
107 Brain Tumors (Tumores cerebraes.) Brant Paes Leme
108 (Nos 16-20 pp 151 200) Pityriasis with Keratinization of Epidermis. (Pityriasis rubra pilaris) F Terra
109 Benefit from Brewer's Yeast in Case of Multiple Glandular Suppuration (Abcessos lymphaticos e levedura de cerveja) A de Mello

102 **Balsam of Peru in Treatment of Wounds**—Guimaraes describes a few cases of wounds treated with balsam of Peru after cleansing with boiled water The balsam was applied for about 10 days and the results were highly satisfactory in each case The injuries were mostly on the hand or foot and caused by machinery In some cases the balsam was applied to a burn of the second degree, or in case of compound fracture The urine was normal under this treatment in the cases in which it was examined for possible injurious action of the balsam on the kidneys

104 **Tropical Groin Ulceration**—Bassewitz remarks that Peruvian verruga is the most perfect type known of an affection limited to a certain geographical region, within the degrees of 75 and 81 longitude, and 8 and 16 latitude It reigns in a limited number of valleys at an altitude of from 1,500 to 6,000 feet above the sea The prevalence of a groin ulceration in his part of Brazil led to the suspicion that the affection might be an attenuated form of Peruvian verruga imported from Peru, but the evidence is against this He regards the affection in question as "granuloma telangiectodes" Unna examined some specimens of the lesions sent to him and says that they suggest a circumscribed angiofibroma of the skin The epidemic and autoinoculable character of the groin ulceration suggests a possible venereal origin, and the description was first published with the title "Granuloma Venereum"

Book Notices

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers

MODERN MEDICINE, ITS THEORY AND PRACTICE in Original Contributions by American and Foreign Authors Edited by William Osler M D Regius Professor of Medicine in Oxford University England, assisted by Thomas McCrae, M.D Volume I—Evolution of Internal Medicine—Predisposition and Immunity etc. Illustrated Cloth Pp 937 Price, $6 00 net Philadelphia and New York Lea Bros & Co, 1907

GENERAL SURGERY, of the Practical Medicine Series Under the General Editorial Charge of G P Head, M D Professor of Laryngology and Rhinology Chicago Postgraduate Medical School Vol II Edited by John B Murphy, A.M., M.D, LL.D, Professor of Surgery in Rush Medical College. Series 1907 Cloth. Pp 608 Price, $2 00 per volume Chicago Year Book Publishers.

UEBER ELEKTRISCHE ENTLADUNGEN IM LUFTVERDÜNNTEN RAUM Geisslerlicht Kathoden—und Kanalstrahlen von Prof. Dr Ernst Sommer Experimentalvortrag gehalten in der Naturwissenschaftlichen Gesellschaft der Stadt Winterthur Paper Pp 18 Price, 75 mk Munich Verlag der Aerztlichen Rundschau.

MUTTERSORGEN UND MUTTERFREUDEN Wie erhalten wir unsere kleinen Kinder gesund? Ratschläge fur die junge Frau von Dr med. Eugen Neter in Mannheim Paper Pp 77 Price 1 20 mk Munich Verlag der Aerztlichen Rundschau.

CENTRAL INDIANA HOSPITAL FOR THE INSANE, Indianapolis. Fifty-eighth Annual Report of the Board of Trustees and Superintendent. For the Fiscal Year Ending Oct. 31, 1906 Paper Pp 120 Indianapolis W B Burford, 1906

ANESTHETICS, Their Uses and Administration by D W Buxton M D B S Member of the Royal College of Physicians. Fourth Edition Cloth Pp 415 Price, $2 50 net. Philadelphia P Blakiston's Son & Co, 1907

THIRTY FIRST ANNUAL REPORT of the Ladies Union Charitable Society Conducting the Lawrence (Mass) General Hospital and Children's Home, for the Year Ending Sept 30, 1906 Paper Pp 69

CATALOGUE OF THE OFFICERS AND GRADUATES OF COLUMBIA UNIVERSITY in the City of New York, From the Foundation of King's College in 1754 Cloth Pp 921 Printed for the University 1906

TENTH ANNUAL REPORT of the Loomis Sanatorium and Annex for the Treatment of Tuberculosis Liberty, Sullivan County, New York With Medical Supplement October 31, 1906 Paper Pp 49

NEUGALENISMUS eine auf biologischen Anschauungen aufgebaute Krankheitslehre, von Kreisarzt Dr Bachmann Paper Pp 18 Price 75 mk Munich Verlag der Aerztlichen Rundschau.

STUDIES IN EXPERIMENTAL ALCOHOLISM Hygienic Laboratory Bulletin No 33 by Reid Hunt M. J Rosenau, Director Paper Pp 43 Washington Government Printing Office, 1907

CREIGHTON MEMORIAL ST JOSEPH'S HOSPITAL, Omaha Neb Twenty seventh Annual Report for the Year Ending Dec. 31 1906 Paper Pp 42. Omaha Burkley Printing Co

ANNUAL REPORT OF THE ASYLUM FOR THE CHRONIC INSANE of Milwaukee County for the Year Ending Sept. 30, 1906. Paper Pp 56 Milwaukee Edw Keogh Press, 1907

MONTHLY SUMMARY OF COMMERCE AND FINANCE OF THE UNITED STATES for February, 1907 Paper Pp 255 Washington Government Printing Office 1907

TWENTY SECOND ANNUAL REPORT of the Adirondack Cottage Sanitarium, Saranac Lake N Y, November 1906 With Medical Supplement. Paper Pp 16

TWENTY SECOND ANNUAL REPORT of the Board of Health of the City of Altoona for the Year 1906 Paper Pp 18

NEW PATENTS

Recent patents of interest to physicians

848458 Clinical thermometer Walter P Grafton Old Charlton England.
848032 Douche-cot. James H Herman, Ambridge Pa
848173 Fracture apparatus Samuel G Hubbell Milwaukee, Wis
848126 Anastomotic clamp Giles F Roosevelt Denver
848579 Inhaler Gustav A Thiede Baltimore, Md.
848518 Electrical medical apparatus. Carlos Van Bergh, Winnipeg, Manitoba Canada
848426 Surgical table top Marshal I Young, Fort Dodge, Iowa
849353 Electric ear phone. Lewis F Clarke Boston
849018 Making camphor from isoborneol Curt Philipp Dresden Germany
848856 Osteopathic table Henry T Root, Kirksville Mo
849344 Illuminable speculum R H Wappler New York
849529 Massage device Forest S Cartwright, Chicago
849368 Electrically heated hot water bottle Herbert W Christian Toledo Ohio
849725 Catamenial bandage. Mary A. Cook Bridgeport Conn
849471 Abdominal guard and supporter John Gamble, Philadelphia.
849472 Bed pan Heiman Gold New York
849841 Physiographical instrument John I Goode Chicago
849844 Vibrator J S C Laurence Oakland Cal
849815 Producing formaldehyd preparations Paul Rosenberg Berlin Germany
849924 Massage instrument. Wm G Shelton Chicago
850416 Means for purifying and sterilizing water by ozonized air James H Bridge Philadelphia
850624 Apparatus for lifting invalids Wm B Closson, Magnolia Mass
850298 Suspensory Frank F De Mars New York.
850849 Disinfecting tablet W H Power London England
850851 Bandage Jeanne Walter New York

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Address

THE COMMERCIAL DOMINATION OF THERAPEUTICS AND THE MOVEMENT FOR REFORM *

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PROPRIETARY MEDICINE A RECENT DEVELOPMENT

The proprietary medicine business as we know it is a development of only a little over a generation In 1875, Lawrence, of *Medical Brief* fame (?), and his junta of nostrum makers, whose output and that of their offshoots alone have run into the hundreds, were unknown Thirty years ago the so-called German synthetic chemicals were unheard of as medicines, now, if we include the true and the false, there are thousands of them Including the typical nostrums, the more or less legitimate proprietary mixtures and the synthetic compounds, the number of proprietary medicines has become so vast that no one is rash enough to attempt to estimate it A few of these, we may admit, have a distinct value, they represent original work and are worthy of recognition as remedial agents The vast majority, however, are but the simplest of mixtures or are well-known drugs put out under fanciful names, with no advantage whatever, or are absolute frauds and swindles Some of these remedies are made by manufacturing pharmaceutical and chemical houses of greater or less repute, the majority by men —or "companies"—who know nothing about medicine pharmacy or chemistry, and who have gone into the business as they might have gone into any other get-rich-quick enterprise

This business has been growing more rapidly than ever during recent years, and the statement made here in Baltimore last December that the use of this class of preparations has doubled during the last decade is probably true But worse than the increase in number is the development in the advertising literature of unblushing falsehood and palpable deception Conditions in this regard had become so disgraceful—I put this in the past tense because there has been a change since the Council began its work—that there seemed to be no statement too silly no claim too extravagant, and no falsehood too brazen for use by those who wrote the advertising literature that physicians were asked to read and to believe It was therefore not only the character of the preparations, but the methods of exploitation that had become unbearable and a disgrace to the profession that tolerated it In brief this business the annual profits of which run into the millions has grown until the use of proprietary medicines by many physicians has almost displaced the use of the individual official drug It has checked advance in scientific methods of treatment, inhibited intelligent clinical observation and developed an optimism that is unwarranted by facts—an optimism that is more fatal than the most radical therapeutic nihilism But above and worse than all, this commercialized materia medica has blighted our literature by debauching our medical journals and even by tainting our text-books

And whose is the fault? That the business has developed in this country to such extent with scarcely a protest on the part of our profession, is a reflection on the common sense and intelligence of the physicians of the United States We as well as manufacturers, are at fault We must assume the blame for becoming such easy dupes to their enterprise and sagacity

But a change is taking place, a halt has been called, and our profession is awakening to the disgrace of it all It is about the movement for ridding our profession of this disgrace that I want to speak to-night

NO PROTECTION IN THE PAST

We have long suffered from a want of governmental or other supervision over the manufacture of medicines In no other country has the standard and quality of drugs been left entirely to the manufacturer's honor From time to time the medical profession has made spasmodic, but weak efforts to remedy the condition we find records of this even as early as the beginning of the nineteenth century

The agitation of those early days resulted in the adoption of a Pharmacopeia the first issue of which was published in 1820 This standard by the way, was the work of physicians and was gotten out by them for the guidance of pharmacists who, however, had nothing to do with its preparation It is to be regretted that conditions have changed and that while the physicians then were the ones interested for the last fifty years they have left it practically to the pharmacists While the Pharmacopeia furnishes standards which were accepted by a few as authoritative it was after all but an advisory instrument and was followed or ignored as suited the manufacturer

The Pharmacopeia only partially improved matter and society transactions continued to contain records of criticisms of the prevailing conditions So it went on until the organization of the American Medical Association At its first meeting resolutions were adopted indicating that the question was still a vital one So again in 1849 1850 and every year or two thereafter this subject was discussed Then, however, the unreliability of drugs was the source of irritation the proprietary medicine abuse not yet being so much in evidence In 1879 we first find the Association recognizing that [illegible] evil w[illegible] [illegible]nce developed into [illegible] [illegible] [illegible] In the [illegible] wing

*The Annual Oration before the Medical and Chirurgical Faculty of Maryland April 24 1907

WHEREAS Of late years many drugs and combinations of drugs bearing copyright names have been placed on the market and especially introduced to the notice of physicians and

WHEREAS Such drugs and combinations of drugs having copyrighted names are advocated in the medical journals of the country, be it

Resolved That the use of articles thus protected by copyright and the promoting of their use by advertising them in medical journals is a distinct violation of Section 4, Article 1 of that portion of the Code of Ethics treating on the duties of physicians to each other and to the profession at large and also of Section 4 Article 1, of that portion of the Code of Ethics treating on the duties of the profession to the public and of the obligations of the public to the profession. (Transactions, vol xxx, 1879, p 45)

From this time on scarcely a year passed that the Association did not take action regarding the proprietary-medicine problem, and finally when THE JOURNAL took the place of the annual Transactions it became on account of the advertisements, a very practical question It is worth recording here that there was a time when our profession opposed proprietaryship in medicines, recently, however, this seems to be accepted as a necessary evil

IMPOSSIBLE TO DEFINE AN "ETHICAL" PROPRIETARY

It is unnecessary to give in detail the difficulties connected with this question, or to explain how absolutely impossible it has been to decide what is and what is not an ethical[1] proprietary preparation It certainly has been a trying question for those editors who have honestly striven to have their advertising pages clean and free from fraud. But long ago it was realized that the problem is one that the physician can not solve by himself A physician is not supposed to be an authority on pharmacy and chemistry, he is expected to know the physiologic and therapeutic actions of drugs, but not the details of their chemical action or the intricacies of their compounding This requires a special training and a technical knowledge entirely different from that required for prescribing for the sick.

The pharmaceutical profession bears the same relation to the medical profession that the ordnance department does to the army in the field The fighting force is not expected to know how to make a rifle, or to have a practical understanding of the manufacture of powder and shot The men on the firing line know how to use, but not how to make the ammunition But nevertheless the efficiency of the men at the front is largely dependent on the integrity and honesty of the supplies of the ordnance department

The trouble has been that the sister professions of medicine and pharmacy have not been cooperating, rather they have been drifting apart

It was in recognition of this principle that, in 1900, there was published in THE JOURNAL a series of articles, written by a pharmacist well qualified for the purpose, on "The Relation of Pharmacy to the Medical Profession" Their object was to enlighten the profession regarding the conditions with the purpose of leading up to the suggestion of a remedy As may be remembered, the remedy suggested was the creation of a body of pharmacists chemists and pharmacologists who should act for the profession and examine the products on the market, or at least take up the subject from a practical standpoint These articles appeared just before the first Atlantic City session and some of us had a vague idea of proposing such a board to the general meeting but the psychologic moment did not seem to have arrived and the matter for the time being was dropped

And so time went on the subject receiving more or less attention in the Section on Pharmacology and Therapeutics at each annual session, till at the Atlantic city session, in 1904, the delegates from Michigan presented to the House of Delegates a preamble and resolutions that had been adopted by their state society, which read as follows

WHEREAS, An exact knowledge of the composition and properties of substances used in the management of disease is essential to a physician s best success

WHEREAS, Commercial push by advertisement and drummers, persuades many physicians (often the very elect), to use and commend drugs mineral waters, artificial foods, etc., etc., of unknown composition and effects

WHEREAS As it is impossible for the individual physician to verify the statements of sales agents, to separate fact from fancy he often uses substances quite unlike those indicated, to the discredit of himself and his art

WHEREAS, The American Medical Association was organized to promote the exact knowledge and intelligent practice of its members

Resolved, That the Board of Trustees, American Medical Association is hereby requested to provide for the analysis of medicinal substances of unknown composition and undetermined effects, and to publish promptly the results in the Association JOURNAL

Resolved That the Board of Trustees be requested to appoint a JOURNAL Clearing House Commission three in number to serve without salary, with authority to have analyses made in reliable laboratories by experts of recognized ability, or to equip a suitable laboratory and employ one or more competent experts, at a yearly expense not to exceed five thousand dollars

THE COUNCIL CREATED

While these resolutions were not finally acted on, some of us realized that the time had at last arrived for something to be done, and for materializing the idea of a board of control During the next eight months the general plan was discussed with many physicians and with such chemists and pharmacists as Professors Long, Stieglitz, Puckner, Hallberg and others of Chicago, Professor Cushny of Ann Arbor (now of London), Professor Abel of Johns Hopkins, Dr Wiley and some of his staff at Washington, Professor Remington, Professor Sadtler, Mr Wilbert of Philadelphia, Dr Sollmann of Cleveland, and others Several meetings were held, at which a few gathered and the general plan and scope of the work was outlined and discussed in all its phases The matter was presented in detail to the Board of Trustees at its meeting in February, 1905 After discussing the matter fully the trustees authorized the creation of the board, and specified that it be known as the Council on Pharmacy and Chemistry

Thus it is that the profession now has at its service a group of men who, for this work, possess special training and technical knowledge Their energies are devoted to the thankless task of winnowing from the chaff of dishonesty the occasional grain of honesty

The first meeting of the Council was held in Pittsburg, Feb 11, 1905 This meeting was an interesting one To me it was not only interesting, but profitable, for my eyes were opened to conditions the very existence of which I had not before realized Among those present were practical pharmacists, practical chemists, well-trained pharmacologists and physicians Each group saw things from its own viewpoint, compared notes and exchanged views As I say, the result was interesting and the revelations both instructive and—humiliating

The work to be accomplished at this meeting was to lay down certain fundamental principles that should govern the Council in its labors, to devise methods of procedure, etc The most serious and important phase of the work was the adoption of the rules or principles which should govern the Council in deciding whether or not a preparation should be accepted

The first thing an intelligent physician does when he is called to treat a patient is to make a diagnosis of the disease, learn its cause, and remove it if possible On this principle the Council attacked the problem.

1 I am well aware that we should not apply the word ethical to an inanimate object. I use it because it seems to be necessary

RULE 4—INDIRECT ADVERTISING TO THE PUBLIC

It was recognized at the outset that the first objection to proprietary medicines is that the prescribing of such preparations is apt to lead to self-medication by the public and the manifest evils which this entails The fact that physicians themselves are responsible for at least some of the "patent medicine" business is well known to every pharmacist and to every physician who has given the matter thought A physician writes a prescription for a proprietary preparation that has a catchy, easily remembered name, and thinks that the matter ends there, but the manufacturer knows better, the patient gets the medicine, and with it all kinds of information regarding its virtues The physician may instruct that the label, circulars, etc, be removed, but in many cases this is not done, and usually no such instruction is given The patient learns from the printed matter that that particular medicine is good not only for the disease for which the doctor prescribed it, but for every other real or imaginary ailment with which he may be afflicted In this way there has been introduced to the public a host of "patent medicines" without a cent of cost for advertising, except that to physicians

The full directions for use which accompany these medicines are, in part at least, responsible for counter-prescribing by druggists There is a peculiar fascination—at least to the average pharmaceutical tyro—in posing as a prescriber, exemplifying the old saying "A little knowledge is a dangerous thing" The "proprietary" nostrum vendors give him the "little knowledge," sufficient, that is, to sell their preparations He soon becomes familiar with the reading matter and he is impressed, or pretends to be, with the wonderful properties of the preparation as described in the circulars He adds his recommendation to those of the doctors whose testimonials he shows to the customers on the other side of the counter

This indirect advertising to the public was the first evil to be overcome, and the first principle adopted by the Council is incorporated in what is now known as Rule 4 It is as follows

No article will be admitted whose label, package or circular accompanying the package contains the names of diseases in the treatment of which the article is indicated The therapeutic indications, properties and doses may be stated (This rule does not apply to literature distributed solely to physicians, to advertising in medical journals, or to vaccines and antitoxins)

It is this rule that has met with opposition from those who are not satisfied with the doctors' patronage but want that of the public also It is this rule that is of most importance to the physician, for its enforcement will check one of the worst evils connected with the proprietary medicine business—that which makes the doctor an advertising medium to the public

Certain manufacturers oppose it because, they say the doctor needs the information and the instruction that is given on the labels and in the circulars The reply is that it is not necessary for the doctor to go to the drug store to learn what a remedy is good for, even though he is one of those who depend on the manufacturer for his knowledge If a doctor dispenses his own medicine and has to depend on the manufacturer for information regarding its use let that information be given in the literature not attached to the package

Medicines manufactured solely for physicians' use such as the official preparations and those of the National Formulary, are not accompanied with circulars or advertising matter and there is no valid reason why proprietary medicines should be If the manufacturer wants to enlighten the doctor regarding the value of his preparation, let him advertise in the medical journals, let him send the circulars, or his detail man, to the doctor direct, in any event, there are many ways of letting the doctor know in what diseases the medicine is indicated without putting it on the bottle It will be noticed that Rule 4 permits therapeutic properties and doses to be given in the literature accompanying the package Many believe, and with good reason, I think, that the Council has been too liberal in this, that no such information is necessary in that connection

It has become a recognized fact in the "patent-medicine" field that the easiest and cheapest way of reaching the public is by advertising through the doctor Let me quote a paragraph that appeared in *Printers' Ink*, an advertising journal, some two or three years ago The words are those of a "patent medicine man and, of course, were not directed to physicians

But the patent medicine of the future is the one that will be advertised only to doctors Some of the most profitable remedies of the present time are of this class They are called proprietary remedies The general public never hears of them through the daily press All their publicity is secured through the medical press, by means of the manufacturer's literature, sometimes gotten out in the shape of a medical journal and through samples to doctors For one physician capable of prescribing the precise medicinal agents needed by each individual patient there are at least five who prescribe these proprietaries They are the chief standby of the country practitioner Three fourths of all the prescriptions received are for these proprietary remedies, and the pharmacist simply opens the package and writes a label, "A teaspoonful three times a day before meals" The original bottle is given to the patient He sees that the remedy does him good and when he feels a trifle run down again he goes to a drug store and buys another bottle, not troubling the doctor He meets a friend on the street who is not looking well "I know exactly how you feel,' he says "Now, just go and buy a bottle of ——— Best thing in the world My doctor prescribed it for me so it isn't a patent medicine.'" In this way the name of the remedies advertised only to physicians get abroad to the general public The proprietary medicine of the future, though, will be advertised through these channels The medical papers will reap the harvest, and the physician himself, always so loud in the denunciation of "patent medicines" will be the most important medium of advertising at the command of the proprietary manufacturer In fact, he is that to day

Have you ever seen an arraignment of this evil by its enemies which equals this cynical statement of its friends?

Is it necessary to say more on this point? In fact, can anything more be said? What I have just quoted should be read by every nostrum-prescribing doctor in the country, and having read it, he should go to some quiet corner and kneel down and pray the Lord to give him a little common sense

Now, while I am quoting let me quote something else This is from a book written by Mr George P Rowell, entitled "Forty Years an Advertising Agent" Mr Rowell, as some of you may know, dabbled somewhat in the "patent medicine' business himself He is the one who created Ripans Tabules In this book by the way he tells how he came to put this preparation on the market In the chapter from which I shall quote he described the "patent medicine business in an interesting way, and tells of the fortunes that have been made and also lost He has this to say about an [illegible] proprietary that some of you [illegible] he [illegible]

We had a successful adv[illegible] of [illegible] a medicine known as Fell[illegible]

good that some shrewd business men in the medicine trade, who knew about it, bought the trade mark, incorporated a company with a capital of $100,000, retained the original owner as manager stopped all advertising except in medical journals, and thereafter pushed the sale only through the medical profession I had information at one time of a young man who was heir to an uncle, recently deceased, and had come into possession of a certificate of stock of this company, of the face value of $6,000, and made up his mind that, shrewd as the old gentleman was, he had, without doubt, acquired trash in this instance, and I heard further, that the young man began to think better of the doubtful asset, when one day a dividend check came, and when, at the end of the year, he realized that within the twelvemonth that $6,000 certificate had brought him $9,000 in dividends, he began to revise his estimate of his deceased uncle s prescience in making investments

As a "patent medicine' it was not a success, but as an "ethical proprietary" it has been proving a gold mine So, since that time this medicine has not been advertised except to doctors through medical journals, has it? Look at the wrapper around the bottle, read the label on the bottle, notice the name blown into the bottle, and then will you doubt the statement of the average druggist when he says that nine-tenths of Fellows' Hypophosphites is sold over the counter direct to the public and that the doctors are responsible? What better method of advertising? And how easy! Newspaper advertising is expensive! It is cheaper to use the doctor

The principle incorporated in Rule 4 is one of the most important principles adopted by the Council It threw out at once three-fourths of the proprietary medicines on the market For is it to be supposed that the promoters of Fellows' Hypophosphites, Gray's Glycerine Tonic, Glycothymoline, Antikamnia, Antiphlogistine, Phenalgin, Santal Midy, and most of the self-styled "ethical proprietaries would conform to Rule 4? From their standpoint the proposal is absurd

RULE 1 —NON-SECRECY

Everybody, that is, *nearly* everybody, agrees that a physician should know what he prescribes Some intimate that he has no moral right to give a medicine unless he knows what he is giving A few emphatically express the view that it should be made a criminal offense for a physician to give a patient a medicine when he does not know exactly what it contains I must acknowledge that I am much tempted to side with the latter In any event, after agreeing on Rule 4, the Council again went back to general principles, and adopted the following which is known as Rule 1

No article shall be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article be furnished for publication The general composition of the vehicle, its alcoholic percentage, if any, and the identity of other preservatives, if present, must be furnished

There was little discussion when this rule was under consideration Even the verbiage was soon agreed to It is so palpably consistent, so absolutely fair and just that one would have imagined that it would receive universal approval But do you remember the protests of certain medical journals when the first announcement was made and these rules published? It was simply outrageous we were told that enterprising firms which had spent money and time in getting up a fine combination should be asked to state what the combination contained One New York medical journal even went so far as to send a circular letter to the manufacturers offering them space in its columns for an expression of their views in regard to the outrageous attempt that was about to be made to injure their business Certainly, this attack on vested interests was scandalous, and it was a good thing that the proprietary people were so well guarded by a journal that is published in the interests of physicians

But the proprietary gentlemen were too wise they did not accept the offer, since nothing appeared from them In fact, the majority of the nostrum men have said that they always have been, still are, and always will be willing to tell physicians what their preparations contain They agree that physicians should know what they are prescribing, that it is very necessary they should know It would be wrong, indeed, if physicians should prescribe without knowing what they are prescribing, say these gentlemen Surely! And the more quackish the preparation and the "company" that exploits it, the more willing they are to give a formula Mind you, I say "a" formula

When some twelve years ago the Board of Trustees ordered that no proprietary should be advertised in THE JOURNAL, unless the advertisement was accompanied with a formula sufficiently often to let the reader know of what the preparation consisted, they imagined that they had done away with the evil—secrecy And this has been the cry since—publish the formula and the preparation becomes ethical It did not seem to dawn on those who were especially interested in this subject that connected with the exploitation of the proprietaries were most extravagant claims as to their therapeutic value, and that those who would make misstatements regarding the therapeutic action of their preparations would not hesitate to stretch the truth when they made statements as to the composition The formula was the thing If the formula was forthcoming the preparation was ethical But it has developed that the more fakish the nostrum the more willingly was the formula furnished So it is not strange that there were admitted to the advertising pages of THE JOURNAL such fakes as Ammonol, Phenalgin Labordine, Campho-Phenique, Salacetin Hagee's Cordial of Cod Liver Oil Compound and Tyree's Antiseptic Powder

The idea that the publication of a formula will make a preparation ethical has been harped on and emphasized until many believe it Now the fact is most of the proprietary mixtures are simple combinations of well-known drugs that any pharmacist or even an average physician could compound if the active ingredients were known Therefore, would not the makers of such preparations be very foolish to give the correct formula even as to the active ingredients? Surely they would be, and the average nostrum maker is not a fool.

I presume it is unnecessary to say that the Council is not satisfied with "a" formula, but demands "the' formula

RULE 6 —EXTRAVAGANT THERAPEUTIC CLAIMS

The man who has something to sell naturally wants to impress the prospective buyer with all its good qualities This is business—honorable business Incidentally, in the business world it is expected that the seller while emphasizing all the good qualities, will tell the truth An exception to this rule may be made to the horse-trader He, proverbially at least, is expected to overstep the bounds of truth in his comments on the quality of his animal But the other gentleman knows this and discounts his statements accordingly He examines the animal, or if he thinks himself deficient in the necessary

knowledge to pass judgment on the value of a piece of horse flesh he gets the advice of a friend who has this knowledge

I admit it is rather far-fetched to compare horse-trading with a proprietary medicine business, but there does seem to be a similarity—and also a difference The seller in both instances is given to a slight exaggeration as to what the respective articles will do in their respective spheres of action, but in one case the buyer, at least as a rule, takes it for granted that the seller is likely to stretch the truth At least, he is healthily skeptical about the matter and does not believe all that the horse-trader says In the other case the buyer, to borrow a simile from another department of life's activities is quite likely to swallow not only the bait, but the tackle also Perhaps he is not so much to blame after all It is a little difficult for honest physicians to realize that others traffic in human life

The claims in the advertisements of "patent medicines" are so absurdly extravagant that a "patent medicine" advertisement has become synonymous with mendacity In too many instances this also applies to advertisements of so-called "ethical proprietaries" There is no limit to the license allowed those who write the advertising matter that is to influence physicians to use the products advertised

To repeat again there seems to be something connected with the "patent" and proprietary medicine business that demoralizes An honest, conservative statement about the merits of a proprietary preparation is as rare as are sweet violets in Iceland As regards the large majority this is not to be wondered at To tell the truth about either their composition or their therapeutic value would be to stop their sale But there are proprietary medicines that have merit and that would be used even if the simple unvarnished truth were told about them, but the habit of exaggeration crops out in the advertising of even these

This was one of the evils recognized and so Rule 6 was adopted, which says

No article will be admitted or retained of which the manufacturer or his agents make unwarranted, exaggerated or misleading statements as to therapeutic value

Of course, the principle underlying this rule is so elemental that one might think that it would meet with no opposition when put into practical application Yet its actual enforcement has caused much trouble in spite of the fact that there has been a liberal interpretation of the literature The diversity of opinion and varied experience in the use of therapeutic agents has been recognized and the Council has admitted every reasonable claim everything short of absolute misstatement and palpably false pretension

OTHER RULES

The three rules above considered meet the most objectionable features of proprietaryship in medicine Indirect advertising to the public through the physician secrecy in composition and false therapeutic claims The enforcement of these three rules would do away with the main evils connected with the proprietary business and incidentally would wipe out a goodly number of the products The other seven rules while important some of them being necessary for the enforcement of the three already referred to, need but a brief reference here

Rule 2 is

No chemical compound will be admitted unless sufficient information be furnished regarding tests for identity purity and strength, the rational formula or the structural formula, if known

There are many preparations on the market, both domestic and imported, that are claimed to be definite chemical compounds, but which are not This rule guards against such, as well as against adulteration, etc No objection has been made to this rule

Rule 3 says

No article that is advertised to the public will be admitted, but this rule will not apply to disinfectants and food preparations except when advertised in an objectionable manner

This rule, of course, refers to open, direct advertising to the public, in the public press etc It is not necessary to defend this rule, before physicians at least It provides for conditions entirely different from that covered in Rule 4

Rule 5 is

No article will be admitted or retained concerning which the manufacturer, or his agents, make false or misleading statements as to geographical source, raw material from which made, or method of collection or preparation

The proviso in this rule is incorporated in the national Food and Drugs Act and needs no comment

Rule 7 says

Labels on articles containing poisonous or 'patent substances must show the amount of each of such ingredients in a given quantity of the product A list of such substances will be prepared

This rule is not really necessary since the passage of the national Food and Drugs Act covers many of the substances referred to

Rule 8 is as follows

If the trade name of an article is not sufficiently descriptive of its chemical composition or pharmaceutical character or is, for any other reason, objectionable the Council reserves the right to include with the trade name a descriptive title in the book Articles bearing objectionably suggestive names will be refused consideration

The last sentence was not in the original draft experience showed the necessity of such a rule I doubt if any one will think this an unwise precaution when we run across such names as Gonosan, Gonorin Gonoral, and Gonol, names certainly suggestive enough even to the most ignorant layman and remembered without difficulty by those who wanted to tell their fellow-sufferers what they were taking Genitone Vaginol Oophorin Virilin Rheumasan Bronchitin Pneumin, etc, are others I am not quoting fanciful names from the 'patent medicine list, they are all advertised to physicians as scientific preparations

Rules 9 and 10 merely require information regarding the copyrighted name and if the article is patented the number and date of the patent They are as follows

Rule 9

If the name of an article is registered or the label copyrighted, the date of registration and a copy of the protected label should be furnished the Council In case of registration in foreign countries, the name under which the article is registered should be supplied

Rule 10 states

If the article is patented—either process or product—the number and date of such patent or patents should be furnished

These rules were adopted in a tentative way at the Pittsburg meeting In the following September the Council met at Cleveland and to that meeting were invited representatives of the various branches of manufacturing and importing interests for consultation and suggestion The various rule [illegible] and only slight modifications were [illegible] that [illegible] objected to by the man[illegible]

Rule 4, but all who took part in the discussion acknowledged that the principle underlying the rule was a just one and would work no hardship on those manufacturers who were catering to physicians only.

At the Pittsburg meeting it was decided that when it was necessary for the manufacturer to change the labels, circulars, and other advertising matter, he should be given ample time in which to comply so that he might not experience undue expense or hardship in meeting the requirement. At the Cleveland meeting this time was extended definitely until July, 1906. Thus previous to July, 1906, the Council accepted preparations even though the labels, literature, etc., might not have been in accord with the rules, on the promise of the manufacturer to make the necessary modifications in a reasonable time. However, since July 1, 1906, the literature, labels, etc., must be correct before the preparation is accepted.

I have discussed these rules at length that you may know what they are and what they mean. Together they give, what has never been given before, a definition of the term, "an 'ethical' proprietary medicine." Is it satisfactory? Together they make the standard by which the Council judges proprietary medicines. Is the standard too high?

PROCEDURE

As the members of the Council are scattered, meetings, except at rare intervals, are impracticable. The method of procedure, however, is simple, communication between the members being through a bulletin prepared and sent to each member by the secretary every Thursday. In this bulletin are arranged systematically the reports, motions, comments, discussions, etc., the matter being indexed so that ready reference to all past work is at hand for each member.

The Council is divided into three definite divisions—chemistry, pharmacy and pharmacology. Articles are assigned to a subcommittee usually consisting of but one member for preliminary report. This subcommittee consults with other members, with outsiders, and, if thought advisable, makes or has made chemical analyses or physiologic examinations. If the subcommittee desires to communicate with the manufacturer, the correspondence is conducted through the secretary of the Council, the identity of the subcommittee not being divulged.

When ready the report is placed in the Bulletin, together with such correspondence or other matter that the subcommittee may think necessary for the guidance of the members in arriving at a conclusion. The report may be preliminary or final. If preliminary, suggestions and advice are asked. If final, the article is recommended for either Class A, B, C or D and reasons given for the recommendation. When the final report is made it is before the whole Council for action. If the article is put in Class A, it means acceptance, if in Class B more definite information regarding the composition is wanted, if in Class C, certain modifications in the literature are required, and, if in Class D, it means refusal of recognition.

The assignment of an article to Class A or Class D is not necessarily final. If an article which has been voted to Class A is later found to conflict with the rules, the action of the Council may be reconsidered. Similarly an article voted to Class D may again be taken up and finally accepted if it is found that it has been made to conform with the rules.

Many manufacturers, believing that the publication of certain information in regard to their products would detract from their value, have often volunteered to furnish information for the private use of the Council. The Council, however, does not receive trade secrets, but insists that all information it receives may be published at its discretion. The Council desires information for the profession, and not for itself alone.

CHEMICAL EXAMINATION NOT ALWAYS MADE

It is needless to say that the Council does not make chemical examinations of every remedy. Such a task is manifestly impossible. If the authors of text-books on physiology, on anatomy or on practice, were to verify every statement they made, such works could not be completed in a lifetime. Instead, the authors, by virtue of their general knowledge of the subjects on which they write, select the truths as they see them. These, finally presented in the form of a text-book, are again accepted as truths by students, because they believe that the author was competent to select from the mass of literature at his command those statements which were most probably true. In the same way the Council has attempted to prove or disprove statements which seemed questionable, while it has accepted those which, from its general knowledge, were believed to be true. In this matter it is needless to say that the Council has been inclined to accept statements made by firms or persons known to be reliable and responsible, while it has been inclined to examine more closely the statements made by irresponsible parties, or by those who seemed to be inclined to exaggerate.

FORMULA NOT ALWAYS RELIABLE—EXAMPLE

At first it was supposed that the statements of all the legitimate manufacturing firms could be taken without question. This supposition, however, was not well founded, and it is here that some of us have been sadly disappointed. We supposed that it was only the pseudo-chemical concerns, those which are not in the legitimate manufacturing pharmaceutical business, who were the offenders, but in this we were mistaken. Even the regular manufacturing concerns have among their specialties preparations that are as fraudulent as are any put out by the typical nostrum vendors. One old-established house for years has had on the market a surgical dusting powder, which it advertised as a definite synthetic chemical compound, the result of great scientific research. The published formula was worded to mystify, and extravagant claims were made for the product. Our chemists showed that this wonderful preparation was a mixture containing approximately 70 per cent of boric acid, 20 per cent of acetanilid with a little thymol, bismuth, cinchonin and salol. This is by no means an isolated case, but fortunately for one's faith in business integrity there are at least some firms that to physicians as scientific preparations.

COUNCIL DOES NOT RECOMMEND USE OF ARTICLES ACCEPTED

The acceptance of an article does not mean that the Council recommends it, this is emphasized by printing the following disclaimer with every publication of accepted articles:

> The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the Council.

At the inception of the work, it was decided to adopt an extremely liberal policy and to accept a preparation

that met the requirements, even though it might not be considered of any great therapeutic value, or as representing anything new or important from a chemical or pharmaceutical point of view Later, when the Council obtains the fuller cooperation of the profession, a higher standard may be adopted for acceptance In sifting the wheat from the chaff it is sometimes advisable to have a coarse enough sieve to let a little chaff go through, but later on it may be desired to have the pure wheat without any chaff, then the sieve must have a finer screen

It is presumed that physicians will think for themselves and use their own judgment regarding the therapeutic value of the preparations accepted

THE BOOK—NEW AND NON-OFFICIAL REMEDIES

We have been speaking of "accepting" or "approving" preparations Accepting for what? Approving for what? Not for the advertising pages of THE JOURNAL, as some have seemed to imagine It would be absurd to go to the trouble and expense for such a purpose In a sense, the Council is compiling a book, and acceptance of an article means that it is accepted for inclusion in this book It will be known as "New and Non-Official Remedies," and will represent the actual tangible evidence, or result, of the Council's work It will contain a description of those proprietaries which have been approved, together with such non-proprietary drugs as have come into more general use and are not as yet in the Pharmacopeia Is it necessary to present arguments to prove that such a book is needed? Heretofore there has been no book, in this country at least, that a physician could turn to for information regarding non-official preparations Every day a physician in active practice who reads sees mentioned in his journals medicinal preparations about which he knows nothing But he wants to know Where shall he look? They are not mentioned in the Pharmacopeia, in the National Formulary nor in but few, if in any, of the standard textbooks on materia medica Heretofore he has had only one satisfactory source of information, if it is a proprietary—the manufacturer And the information he will receive from him will most likely be voluminous, but too partial for unquestioning acceptance Why not make it unnecessary for such an inquirer to depend entirely on biased information?

This book will tell him what the preparation is, what is claimed for it, the dose, where it can be obtained, and whether patented or trademarked It will give him the most favorable information consistent with truth, quoting even the claims of the manufacturer, if they are not too optimistic But it will tell him what will not be found in the literature sent him by the manufacturer—it will inform him if it is liable to have untoward effects, etc It will, in short, supply him with information that is uninfluenced by commercialism

It will be supplementary to the Pharmacopeia and will contain preparations that later will become official, as for instance, the various patented products which because they are proprietaries, are not usually admissible to the Pharmacopeia The last revision of the Pharmacopeia contained preparations that, while in general use by physicians at the time, did not appear in the former edition In 1893, for instance phenacetin was in general use, but it did not appear in the Pharmacopeia issued in that year If this preparation, which is now official as acetphenetidin is a good thing to-d it was then There are a number of such preparat already accepted that will probably be in the next 1 macopeia,

BOOK NOT LIMITED TO PROPRIETARY ARTICLES

At the beginning it was intended to include in the book only proprietary articles, but time and experience have shown the need of including more than these. New drugs are continually being added to our therapeutic armamentarium that are not in the Pharmacopeia For instance, a little while ago phenolphthalein, long in use in laboratories, etc, as an indicator, was discovered to have purgative effects, and clinical use seems to demonstrate that it may have certain advantages over other aperients In fact, it is already on the market under various proprietary names, as purgen, purgen konfect, purgatol, purgotin, laxirconfect, laxine, el zernac, etc The Council has decided to include this in the book Thus physicians will be able to learn what phenolphthalein is at the outset and will not be deceived for years into using it under various fanciful names and at many times its cost. But, above all, they will not be misled by the extravagant claims of commercial interests

Hexamethylene tetramine had been known before its value as a urinary antiseptic was discovered then it was put on the market under various trademarked names At the present time the Council would undoubtedly accept this for the book, with a description, and we would not be bothered with a dozen or more different names for the same article Incidentally, I hoped a less cumbersome name would have been given the preparation than was adopted by the Committee of Revision of the Pharmacopeia Four trade names for hexamethylenamin already have been accepted, but this is done not to encourage many names for the same thing, but to furnish information Thus a reference to the book will disclose that Urotropin, Formin, Methaform and Uritone are different manufacturers' names for hexamethylenamin

The permanent addition to our materia medica of really meritorious articles has been slow, extremely slow, but the elimination of those without merit has been still slower And, what is of more importance, this elimination has been achieved at the loss not only of money, but possibly even of human lives The indiscriminate and unscientific drug experimentation that has been carried on by physicians at the behest of commercial interests and without any knowledge except that furnished by such interests is not creditable It is hoped that this book will check this, to some extent at least

BOOK WILL BE AN ANNUAL

The idea is that this book will be issued as an annual, each revision to include the addition of new drugs and proprietary articles that are deemed worthy of admission those that for good and sufficient reasons should be omitted will be left out. The descriptive matter will also be modified as may be found necessary from the developments of the year Manufacturers are slow to call attention to untoward results It will be the function of the revisers of this annual to incorporate both the favorable and the unfavorable

Personally as one who has had experience in general practice I know that it will be of immen value Heretofore there has been no wa for the con cientious practitioner, the medical writer or the editor to differentiate the true from the false. For these the book "New Non Official Reme nish a eliable

on

a reprint of the articles as they appeared in THE JOURNAL and is issued for two purposes To invite criticisms and suggestions, and, what is more important, to furnish even now a book of reference for those who want to support the Council in this movement by using only such preparations as have been approved Another similar edition will be issued shortly, slightly modified, with an index and more information than appears in the first reprint, and, of course, it will include the articles that have been accepted since the first edition was printed It is probable that two or three editions of this preliminary report may be issued before the official book is published

CAN NOT PUBLISH BLACKLIST

It has been suggested that the Council print a list of the preparations that have been refused recognition, since there are many who have intimated that they would not prescribe or recognize in any way the rejected articles This is impracticable First, because the number is too large, second, because the Council hopes that some may reform or be withdrawn without necessitating a resort to extreme measures, and, third, because it might and undoubtedly would involve us in lawsuits A blacklist is not a safe thing to make public

The Council is publishing from time to time reports condemnatory of preparations, with comments, but this has to be done with great caution, every statement must be verified or injustice might be done Further, the function of the Council is to approve rather than to condemn When it does condemn and publishes its condemnation, it is for a specific purpose, that purpose being to educate physicians by presenting concrete examples of the way they are being imposed on

CHEMICAL LABORATORY

A chemical laboratory has been established in the Association building and is in charge of the secretary of the Council, Professor Puckner, and an assistant While it is not possible to do a large amount of chemical work in this laboratory, it will be of great advantage in many ways

In connection with the movement much information relating to the general subject has been gathered This has been classified, indexed and made available for the future. This, in fact, is one of the important features of the work being done in the central office In the past considerable matter has been published showing the fraudulent character of products manufactured not only in this country, but in Germany and abroad generally Such matter has usually been published in drug or chemical journals and has never come to the attention of physicians—the very ones who should have been informed

The important drug and chemical journals of the world are taken for the laboratory, and the information obtained from them is most valuable It is needless to say that hereafter physicians will be informed of matters which concern them that appear in this class of journals

In connection with the laboratory is an information bureau, in one division of which advertising literature has been collected and classified This includes booklets, circulars, advertisements and write-ups in medical journals, etc, covering the last five years The exhibit is interesting and instructive for those who want to make a study of this nostrum business, and will furnish texts for future sermons in the propaganda for common sense in therapeutics

Another division directly related to the above is a card index of those who have given testimonials or furnished write-ups of proprietary preparations These cards are made up in great part from the matter on file This division also is most interesting While it contains the names of a few excellent men, the great majority are hardly known in their own locality, and yet their opinions are accepted without question by intelligent, well-educated practitioners Some seem to have a habit of giving testimonials for all kinds of things and it requires considerable space to record the references It is encouraging to note that this exhibit is not growing so fast as it was Evidently, testimonial giving is not so popular as it was previous to a year and a half or two years ago

It is well known that while the *name* of a product does not change, the *composition* of the product may, and does To be able to show this in the future, samples of many proprietaries are preserved, with date of receiving, etc

COOPERATION OF OTHERS

One favorable development is the cooperation of other workers in similar fields A number of chemists in universities, schools of pharmacy, etc, have volunteered to assist, and it is expected that in the future the aid of such men will be of great advantage in solving questions on which they are especially well qualified to pass Several state and municipal boards of health are doing good work, and exchange of information with these is now a feature This promises to develop in the future to the mutual benefit of these boards and the Council It is hoped, in time, to interest teachers in medical colleges, such help is sorely needed

The advantage to the Council of having as members Dr Wiley, chief of the Bureau of Chemistry, and Dr Kebler, chief of the Drug Laboratory, has been very great, for it has received not only their personal aid, but also material assistance from the departments with which they are connected In fact, without the aid of these laboratories some of the work done would have been impossible The profession is also under great obligations to Surgeon-General Wyman, who permitted Dr Reid Hunt to serve as a member of the Council Through Dr Hunt's connection with the Hygienic Laboratory of the Public Health and Marine-Hospital Service, and with the permission of Surgeon-General Wyman, it has been possible to refer certain intricate problems to that laboratory that otherwise would have been difficult of solution

FOREIGN COOPERATION

Another promising feature is the fact that the Council is getting in touch with workers abroad For instance, splendid work is being done in Berlin, especially in the investigation of the synthetic chemical compounds under the auspices of the German Apothecary Society This is directed by Professor Thoms of the Pharmaceutical Institute of the University of Berlin, a chemist of international standing Correspondence with Professor Thoms has been carried on for some months, and he has offered to assist the Council whenever possible At the request of the Council, the Board of Trustees of the American Medical Association has just elected him a corresponding member of the Council

Professor Cushny of the University of London has been a corresponding member since he left this country soon after the Council was organized

It is hoped very shortly to get similar foreign correspondents in Paris, Switzerland and in other countries

Such cooperation will be of great assistance in dealing with foreign products

One of the conditions which the Council has had to meet is the exploitation of foreign goods by American agents who advertise them, sometimes innocently, under claims that are not accepted abroad In some instances products had been sold abroad under claims regarding the composition that were shown to be false Over there the manufacturers were compelled to modify their statements, but the old claims are still being made here. The Council has already secured a modification of the literature relating to certain foreign products by calling the American agents' attention to the fact that if such modifications were not made the actual facts regarding the preparation would be published

A large number of preparations made here are advertised as being made abroad Further, some are made abroad for the American market that have absolutely no sale in the country in which they are made. In due time evidences of these facts will probably be given to the profession

I have given a brief review of the conditions which led to the organization of the Council, have outlined the principles or rules by which proprietary articles are judged, and have spoken of the mode of procedure I have not told you of the difficulties the Council has encountered, and I think this hardly necessary, for I am sure all know without being told that these difficulties have been very great

CONDITIONS ALREADY IMPROVED

The work has been going on for a little over two years To all appearances there are just as many nostrums on the market and the advertising pages of certain medical journals are just as well filled with this class of medicines—in fact if the truth must be told, better, and for reasons that should be evident But in spite of this apparent evidence of prosperity, if one looks beneath the surface one will find that a change has taken place There has been a gradual decrease in the number of write-ups of proprietaries, there is evidence that physicians are thinking, that they have developed a healthy skepticism and no longer believe all that is told them about the wonderful cure-alls they are asked to prescribe The detail men do not have such willing and credulous listeners There has been a remarkable falling off in the sale of "ethical" proprietaries especially those of the typical nostrum type This is common knowledge to those in touch with the trade A comparison of the catalogues of some of the manufacturing houses in circulation two years ago with those of to day will reveal the fact that not a few of the "specialties" are missing And the descriptive matter formulas etc of many others are different from what they were A part of this is explained by the national Food and Drugs Act but only a part Many of the changes had taken place before this law was passed

The influence of the Council in this connection has been greater than will ever be known The knowledge that our profession is at last awake that it has a body to expose the frauds that may be imposed on physicians has aroused some of the manufacturers at least to realize that old conditions have changed The advertising literature is scrutinized more carefully positive cures for incurable diseases are not so common

"WHAT ARE YOU GOING TO DO ABOUT IT?"

This much has been accomplished and yet what does it amount to compared with what must be done before American medicine is rid of the nostrum blight? The work has really just commenced The exposés that have been made and the publication of facts regarding the nostrum business have made a large minority of the physicians think But it is evident that much more must be done to arouse them to act. And this brings us to the question, "What is the profession going to do about it?"

The Council is purely an advisory body, there is no national, state, county, city or any other law that will compel the manufacturer to recognize it or to comply with its requirements Hence, without the support of our profession its work will be of no permanent value But this must be more than a passive support Simply endorsing the work by words, by commendation or by that indefinable something called moral support, is well enough so far as it goes But if definite, permanent, tangible results are to follow, the profession must act. If the profession does not act and does not back up this movement, rest assured we shall in time drop back into the old conditions, or into even worse

HOW THE PHYSICIAN CAN HELP

This movement was inaugurated directly for the benefit of the medical profession and indirectly for the benefit of the public There is no question as to the final success of the propaganda, but the work will be greatly facilitated if you who are interested will

First.—If you use proprietaries, secure the list of approved preparations and, all things being equal, give those in the list preference in prescribing This list, with a description of each article, costs but a few cents, without the description it may be had for the asking[2]

Second.—Write to those whose preparations you are using and ask if the articles have been submitted to the Council, if submitted and refused recognition, why? and if not submitted why not? Bear this in mind The manufacturers will recognize the Council and ask to have their controlled products placed in the book if physicians insist that they desire this, otherwise, they will do neither

Third.—Ask detail men who call if the preparations represented have been approved by the Council and if not tell them that until this has been done you do not care to take time to examine the product

Fourth.—Look over the advertising pages of the medical journals you are supporting—editors and publishers have great respect for the opinion of their subscribers—and write and ask for a square deal in the advertising, as well as in the reading pages

Will it be out of place for me to suggest here that the members of the Council have a right to ask for your support, when they are working absolutely without pay? Is it presumed that they will keep on indefinitely and submit to jeers and sneers if those whose interests they serve do not themselves do their share?

I am sure that every intelligent physician unless he has some interests on the other side believes that the movement is a good one, and deserves all the support the profession can give it I am also sure that every one of you believe this But—what are you going to do about it?

Let me repeat Moral support alone will not win this battle

2. For prices see advertising th

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Original Articles

THE CURE OF UNILATERAL RENAL HEMATURIA BY INJECTION OF ADRENALIN THROUGH A URETER CATHETER.

HUGH H. YOUNG, M.D
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BALTIMORE

The following case of persistent hematuria from the left kidney of sixteen months' duration, which was cured by the injection of adrenalin in the renal pelvis through a ureter catheter, seems of sufficient interest to warrant publication

It is interesting because of supposed traumatic origin, an injury having been received ten days before the hematuria began, because pain was constantly present in the side injured, but the hemorrhage came from the opposite side, because of the absence of any signs of nephritis which is held to be generally present in such cases, and because no previous publication of the use of adrenalin for such purpose has been found in the literature

Patient—R. H. D, single, aged 36, admitted Dec. 3, 1906, complaining of blood in urine.

History—His family history was negative, as was also his past history Patient had never had gonorrhea nor syphilis No previous urinary trouble

Present Illness—In July, 1905, while working on a farm, the rack of a hay wagon fell over on the patient, and a large iron bolt struck him on the right side of the back "between the ribs and hip bone" He was stunned for a few minutes, but soon was able to return to his work, although there was considerable pain present in the region of the trauma. During the next week he had a good deal of pain in the right lumbar region, but he continued at his work Ten days after the injury he noticed for the first time that the urine was quite bloody He feels sure that there was no hematuria before this, and says that micturition was normal in every way before and after the onset of the bleeding There was no swelling present in either side, and he felt well but for the dull pain in the right lumbar region which had persisted since the accident There had been practically no let up in the hematuria since its beginning, although the amount of blood present had varied somewhat During this time his general health had been excellent and his only symptom had been a slight, dull pain located in the right lumbar region, almost constantly present but never severe The blood had always been well mixed with the urine—never any clots Never any pain nor discomfort on the left side, nor any disturbance to micturition The urine was continually bloody and had been so for the previous 16 months The patient had lost weight and was much weaker than normal He had a dull pain "in the region of the right kidney" which he said felt beneath the ribs in front and in the small of the back on the right side Occasionally the pain radiated toward the right hip bone, but never into the bladder, groin nor testicle There was a slight increased frequency of urination and occasionally burning pain in the urethra His sexual powers were normal, and he had no pain during ejaculation, during defecation or during urination with the exception of the occasional burning pain in the end of the penis previously spoken of

Examination—The patient was somewhat emaciated and rather pale There was a slight arteriosclerosis present The heart and lungs were negative Neither kidney was palpable nor tender, and there was no tenderness along the course of either ureter The patient did not complain when deep pressure was made on the region of the kidney on either side The genitalia and rectum were negative The urine voided in three glasses was uniformly reddish brown in color Under the microscope only blood cells were to be seen There were no bacteria present.

Cystoscopic Examination—A catheter was passed with ease and there was no stricture present The bladder was large and difficult to wash clean of blood The cystoscope showed a slight median prostatic bar with a shallow cleft on each side The lateral lobes of the prostate were not enlarged. The bladder was normal The trigone was a little irregular and hyperemic The ureteral ridges and interureteral ligament were slightly hypertrophied The right ureteral orifice was small, secreted at normal intervals and the urine emitted was apparently clear The left ureteral orifice was larger, located in a prominent papilla and surrounded by congested blood vessels, but no distinct ulceration or inflammation was seen It was secreting intermittently at normal intervals and the fluid coming from it was smoky in color The patient was given urotropin (hexamethylenamin) and was requested to return for ureter catheterization He was also sent to Dr F J Baetjer for skiagraphs to be made

On Dec 4, 1906, Dr Baetjer reported that skiagraphic examination of the kidneys was negative Within the bony pelvis and along the supposed course of the right ureter were two small shadows about 5 mm in diameter, lying close together and apparently about 1 cm above the point of juncture of the ureter and bladder They might have been phleboliths, but Dr Baetjer was inclined to think that they were small ureteral calculi Nothing was seen on the left side of the pelvis or along the other portions of either of the ureters

Cystoscopic examination was again performed and bloody urine was seen coming from the left kidney and clear urine from the right

Ureter Catheterization—On Dec. 8, 1906, both ureters were catheterized with the double Casper ureter catheter cystoscope with very little difficulty, the catheters being introduced about 4 inches on each side The urine coming from the left side was bloody, that from the right side was clear until about 5 c c. had been secured, after that a small amount of blood appeared in the urine Urine came from the left side much more rapidly than from the right, the total amount collected being about four times as much during the same interval The urinalyses were as follows

	Combined Urine	Right Kidney	Left Kidney
Color	Dark red	Slightly tinged with blood	Dark Red
Sp Gr	1030	Amount too small	Am'unt too small
Sugar	None	None	None
Urea		0 16	0 19
Albumin	Considerable	Faint trace	Considerable
Microscopic	Blood corpuscles No pus or bacteria. No casts.	Few red blood cells No casts	Many red blood cells No casts.

It seemed evident from the examination that the hematuria was from the left kidney and that there were no calculi in the right ureter, as no obstruction was encountered in introducing the ureter catheter It occurred to me that adrenalin might be useful to cause a cessation of the hemorrhage from the left kidney and I therefore decided to introduce it through the left ureteral catheter For this purpose 2 c c. of adrenalin was added to 8 c c of sterile water With a small syringe about 3 c c was first injected through the catheter into the left ureter The syringe was then removed and bloody fluid allowed to escape from the ureter catheter When this ceased about 3 c.c of adrenalin was again introduced The introduction of the fluid caused pain which the patient felt in the small of the back and beneath the ribs on the left side When some of the fluid was allowed to escape the pain became less, but after the withdrawal of the catheters, which was done after 6 c.c of the adrenalin solution had been introduced, the pain in the region of the left kidney persisted, and after the patient was removed from the table he continued to complain of considerable pain in this region There was no pain referred to the region of the right kidney, and in fact the patient remarked that the dull pain which had been constantly present on that side had disappeared as soon as the pain on the left side came on The patient soon voided a considerable amount of quite bloody urine He then lay down for a while, but after about an hour returned home

Convalescence—During the evening following the injection a request was received to visit the patient at his home He felt weak and complained of considerable pain in the region of the left kidney The urine was deep red in color, no infection was present

On Dec 9, 1906, the patient reported that at 8 p m the previous evening he had a very severe attack of colliky pain in the left side, beginning in the region of the kidney and radiating downward to the bladder and end of the penis, he subsequently passed a large clot and the pain subsided Seven hours later and again at 8 p m of that day similar attacks occurred, but they were much less severe and did not last so long The patient said that during these attacks he voided urine which was perfectly clear, but when the pain passed away the urine was very bloody and contained clots An examination of the clear urine passed while the left ureter was plugged, shows urea 0 22 per cent.

Dec 10, 1906 Another very slight attack of pain, slight headache and fever

Dec. 11, 1906 At 3 a m the patient had a slight attack of pain in the region of both kidneys lasting two hours Urine was still bloody

Dec 12, 1906 The patient said the urine was now clear Examination shows that it was slightly smoky and contained red blood cells No bacteria were persent

Dec 15, 1906 For three days previously the patient had had only a slight pain in the region of both kidneys and the urine had been free from blood He had had no fever, but he felt nervous

Dec 18, 1906 The urine was still slightly cloudy and showed red blood cells

Dec 21, 1906 The urine was perfectly clear in all three glasses, it was amber in color and a centrifugalized specimen showed no red blood cells nor casts He said that there had been no blood in the urine for three days He had a slight dull pain in the small of the back, but there was no pain in the region of either kidney, and the pain which was present in the right side up to the time of the injection of adrenalin had not been present since He said that this was the first time in one year and four months in which the urine had been absolutely clear He had taken no treatment except urotropin, which had been given to prevent urinary infection This was given for a week before the ureters were catheterized, but had no effect on the hematuria

Dec 30, 1906 The urine was clear, but a centrifugalized specimen showed a few red blood cells He still had a slight pain in the back, but felt well and had no frequency or difficulty of urination Neither kidney was palpable, and there was no tenderness on deep pressure over either kidney or ureter

Jan 2, 1907 The urine was clear in all three glasses and centrifugalized specimen showed no red blood cells and no casts The patient felt well, had only a slight pain in the back and the kidneys were not tender

Feb 2, 1907 The patient had been at work for some time He said that he occasionally suffered from slight pain in the small of the back, which was increased somewhat by active exercise, but when he was quiet he was entirely free from pain He slept well and felt perfectly well in the morning He had gained 11 pounds since the injection of adrenalin and his general health was excellent His urine continued to be entirely free from blood

Second Examination—The patient appeared well and his lips were of good color There was a slight arteriosclerosis but the pulse was regular and of good volume, 100 to the minute Examination of the kidney was entirely negative There was no tenderness on deep pressure either beneath the ribs or in the lumbar region with the exception of slight tenderness on the left side on deep pressure The urine was perfectly clear, light amber in color sp gr 1019 with no albumin no sugar and the centrifugalized specimen showed no casts pus nor bacteria He had no treatment since the injection of adrenalin with the exception of urotropin which he took 20 grains daily for three days and has taken none since

On March 8 1907 the patient returned for examination He said that he had been at work daily and that there had been no return of the hematuria Micturition had been entirely normal Work seemed to produce a slight pain in the back, and several times he had a dull pain in the right side of the back, and occasionally in the left side of the back This was present only in the daytime and disappeared in the evening He still suffered from headaches but not nearly so severely as before His eyes troubled him and he wore glasses which he thought did not suit him very well He had gained in weight and general health and his strength was good The patient looked well Physical examination was entirely negative The urine was clear and normal There was no albumin, no casts, no blood, no evidence of nephritis

The subject of renal hematuria without material cause has of late received considerable attention in the literature, and during the last few months important articles by Casper Fowler and Chute have appeared

Casper[1] reports seven cases of unilateral hematuria in five of which operation was performed In four cases the hematuria was due to chronic parenchymatous nephritis, which in two cases did not show itself until several months after the operation, although sections from the kidney at operation showed definite evidence of the disease In one case the hemorrhage came from carcinoma involving the pelvis of the kidney In two other cases the kidney from which the hemorrhage occurred was removed one on account of injury to the renal vein and in the other case on account of the very weak condition of the patient Although very careful macroscopic and microscopic examinations were made in both of these cases the source of the hemorrhage could not be made out, and with the exception of a few small fibrous points the kidney was normal

Fowler[2] reports an interesting case of unilateral hematuria, in which he removed the kidney, microscopic examination of which showed a chronic diffuse nephritis Subsequent to the operation an increasing amount of albumin and casts were found in the urine, and finally a few red blood corpuscles, thus showing distinctly that the apparently sound kidney was also diseased Fowler has made a careful study of the literature and shows that many of the cases of supposed hematuria from sound kidneys were really cases of nephritis, but he quotes Schede as saying that he has found six cases recorded by competent observers in which careful microscopic studies of the extirpated kidneys showed no evidence of nephritis or other cause for the hemorrhage I am able to add another case of unilateral hematuria without demonstrable lesion in the kidney In this case the hematuria of several years' duration came from the left kidney An exploratory operation was performed and during this the ureter was accidentally torn so that nephrectomy had to be done Very careful examination of the kidney was made in the pathological laboratory of the Johns Hopkins University and nothing abnormal was to be made out The patient has since remained entirely well Adding the two cases of Casper we then have at least nine cases of unilateral hematuria in which careful examination showed no evidence of nephritis or other cause for the bleeding It therefore seems evident that there are a definite number of cases in which there is no pathological explanation for the hematuria

As regards the character of nephritis associated with hematuria there is much divergence of opinion Israel Pousson Edebohls Rosing and others hold that nephritis may at times be unilateral and in fact only involve isolated portions of one kidney Fowler divides chronic nephritis associated with hematuria into two groups first those in which the nephritis is diffuse

1 Archiv f klin Chir Berlin lx
2 Studies in Urological Surgery
port xiii

ond, those in which the nephritis is circumscribed or partial, and notes cases of Albarran and Nicolich in which careful pathologic examinations demonstrated lesions of this nature in two cases of unilateral hematuria Casper, on the other hand, vigorously combats this view and holds that chronic nephritis is always double and diffuse and claims that these isolated lesions which have been described in kidneys extirpated for unilateral hematuria are frequently seen at autopsy where no hematuria had been present and are simply the results of some old lesion which had long since been cured Similar lesions are frequently seen in various organs of the body Casper says that he has catheterized both ureters in more than 100 cases of nephritis and has always found the albumin bilateral He says that the urine in these cases never contains bacteria and that the nephritis is the result of toxic processes, and therefore necessarily bilateral The unilateral nephritic lesions which have been described, he thinks, are the results of localized arteriosclerosis or focal bacterial infections and that their tendency is toward the formation of a localized area of sclerosis and is not progressive as in cases of true nephritis Malherbe and Legueu, after an exhaustive study of the subject, assert that it is well established that chronic nephritis can establish itself in only one kidney and be characterized by a single symptom—hematuria This is proven by numerous nephrectomies where nephritis was found and the patient has remained cured A careful review of the literature shows that there is need of much work, both clinical and pathologic, in order to clear up this important field of renal pathology and therapeutics

The diagnosis of the cause of unilateral renal hematuria is not always easy Fortunately, the more common etiologic factors, calculus and tuberculosis, are usually recognized easily by means of the Roentgen ray and bacteriologic study of the urine In the case of a tumor the diagnosis is not so easy As a rule, however, the neoplasm reaches palpable size before the hematuria becomes marked, but in some instances this is not the case Occasionally the Roentgen ray will show a definite enlargement of the kidney, and tumor may be suspected, although it is not palpable In cases of hematuria associated with nephritis there may be many unmistakable signs of the disease present, but according to Albarran and Hamonic the hematuria may precede the disease by several years As a rule, however, bilateral catheterization of the ureters will demonstrate albumin and casts in the urine from the kidney which is not bleeding Casper says that cryoscopy is of little help in these cases and that the elimination of the sugar after phloridzin injections is about the same from both kidneys In only one of four cases did Casper find the urine, obtained by ureter catheterization from the non-bleeding kidney, to be free from albumin or casts, and as the kidney was not removed in this case it is impossible to say that the albumin which has persisted does not come from the kidney operated on and that he had a definite case of unilateral nephritis In both of Casper's cases in which the extirpated kidney was found to be free from nephritis the urine obtained by catheter from the non-bleeding side showed no casts and practically no albumin The same was true in my case. It seems, therefore, to be pretty definitely shown that simultaneous bilateral ureter catheterization will generally show evidence of nephritis in the non-bleeding kidney if such disease is present and that in cases where the urine thus obtained is entirely normal the diagnosis of bilateral nephritis at least, can be excluded

PROGNOSIS

This study of the literature has shown conclusively that great importance should be given to apparently causeless hematuria and that it should not be allowed to run on indefinitely without due efforts being made to determine the etiology For this purpose bilateral ureter catheterization should always be done The double ureter catheterization cystoscope of Casper has proved the most effective instrument for the purpose in my hands, but the new Nitze instrument is perhaps easier to manipulate The operation can be done under local cocain anesthesia (4 per tcent cocain in bladder and urethra), generally with little pain and without much difficulty

Enough urine should be collected for a careful urinalysis, and a comparison between the separate specimens and the combined urine voided immediately before catheterization made The case reported at the beginning of this paper demonstrates to my mind the importance of attempting to stop the hemorrhage by the injection of adrenalin through the ureteral catheter The excellent result which was obtained in this case proves conclusively its therapeutic value in certain cases, and I am convinced that it is practically free from danger Even in cases where a definite lesion, such as nephritis or renal tumor, may be present the use of adrenalin would not seem to be contraindicated, in fact, it may prove of great diagnostic value It would seem probable that, in cases of nephritis, if the hematuria ceased after the use of adrenalin, a better opportunity would be afforded for carefully examining the urine and determining the presence of a nephritis, and it is possible that the hemorrhage with its marked weakening effects might completely disappear, even though the nephritis persisted In the case of renal tumor I do not believe its use would be contraindicated, because I am firmly convinced that if the hemorrhage were due to ulceration of the new growth into the urinary passages it would promptly recur, so that the use of the adrenalin would not greatly delay an exploratory operation to determine the exact nature of the lesion On the other hand, if a neoplasm were suspected the subsequent ureteral catheterization when the urine is free from blood would give a far better opportunity to study the relative value of the urine from the two sides and by functional diagnosis aid in the recognition of marked renal impairment on the bleeding side, a finding which would be suggestive of tumor

As remarked above, however, the question of renal hematuria without other symptoms is a subject about which comparatively little is known and should receive considerable study in the future With the use of adrenalin to stop hemorrhage we may have a measure of considerable diagnostic and therapeutic value If we can in this way cure, as in the case reported above, cases of persistent hematuria without definite renal disease much will be gained and patients saved from the ordeal of cutting operations If only a temporary cessation of the hematuria can be procured in other cases a chance will be afforded for a more careful study of the urine and a comparison of the function of the kidneys which may make renal diagnosis much more easy

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The Urine in Nephritis—W G Vincent (*New York Med Jour*) states that the further we get away from the strictly parenchymatous types of nephritis the less we can depend on the urine examinations alone to determine the actual pathologic condition of the kidney, though they give us an approximate measure of its functional value.

STRANGULATED HERNIA *

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Clinically, the term strangulated hernia refers to strangulated abdominal types It may be defined as "that condition in which the contents of the sac are so constricted or girt about that there follows pain obstruction, vomiting, irreducibility and absence of expansive impulse"[1] The relative frequency of strangulation, based on a report of 529 cases is as follows

250 cases of strangulated femoral hernia
250 cases of strangulated inguinal hernia
29 cases of all other abdominal types

The pathology of strangulation may be considered with reference to the gross anatomy of hernia, the histopathology of the strangulated parts, and the mechanisms precipitating the crisis

By reference to the gross anatomy it is observed that the constriction may occur in the canal transmitting the hernia, in the hernial sac or its contents (Figs 1 to 7) If in the canal, it is usually at one of the natural openings or rings guarding the entrance and exit (Fig 2) Otherwise, it may be determined by cicatricial contracture or by the pressure of a neoplastic or inflammatory swelling (Figs 3 and 4) If in the hernial sac, it may be at one or more places in the neck or fundus, or in a diverticulum (Figs 4 and 5) In such cases the sac is usually thickened by hyperplasia, or by plicature of its lining If in the hernial contents, it is secondary to adhesions or the direct result of volvulus (Fig 6) Constriction may also occur at a rent in the sac through which the hernial contents have extruded (Fig 5)

The histopathology of the strangulated parts is essentially that of the phenomena accompanying passive congestion, septic infection, and moist gangrene

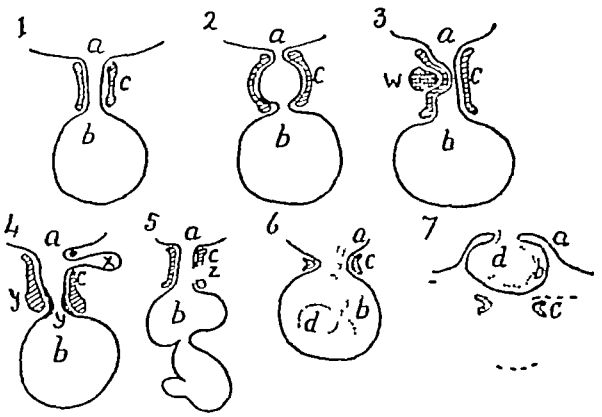
Our present knowledge of the mechanisms precipitating strangulation is hypothetical The two essential elements in strangulation are the constriction itself and the hernial contents bound off by it The first is usually a constant the second is a variant, in that it is subject to rapid alterations in anatomic make up form volume and position In connection with the forces exciting these critical alterations, it may produce strangulation in the following ways 1, By passing through the constriction under sufficient pressure to induce strangulation at once, 2 by undergoing critical alterations, after having safely passed the constriction that increase the pressure to the point of strangulation, 3, by the passage of an additional structure through a constriction filled with all the hernial contents it can safely transmit 4, by volvulus in a part or all the hernial contents The constriction itself, which is practically a constant, may become a variant by critical contraction of its lumen incident to cicatricial thickening acute swelling or external pressure Thus it may close too tightly about the contents of an unreduced hernia and bring on strangulation

SIGNS AND SYMPTOMS OF STRANGULATION

The earlier symptoms and signs of strangulation are abdominal pain vomiting quickened pulse and sometimes elevation of temperature, associated with irreducibility, absence of expansile impulse and increasing volume, turgidity and tenderness of the hernia If the bowel is caught we have the additional symptoms of intestinal obstruction and cessation of the gurgling sound within the hernial sac The late symptoms are essentially those of peritonitis or of abscess formation and the more aggravated manifestations of intestinal obstruction The pain is intermittent and colicky or continuous At first it may be general or localized about the umbilicus or epigastrium, finally it centers at the seat of strangulation The vomiting is at first reflex, but later is due to reversed peristalsis or the direct action of septic poisons on certain brain centers Stercoraceous vomiting seldom begins inside of forty-eight hours Tenderness over the tumor may develop later A sudden cessation of pain and of symptomatic violence without reduction of the hernia is a bad omen

DIAGNOSIS AND PROGNOSIS

The diagnosis of concealed strangulated hernia is of vital importance. Persistent abdominal pain especially if accompanied by vomiting, with the diagnosis unsettled demands a search for this condition Strangulation of Richter's hernia, one in which only a part of the circumference of the bowel is caught, is most fatal and difficult to diagnose In operating for this condition, it is essential not to allow the strangulated segment to slip into the abdomen without thorough examination



Strangulated Hernia—a abdominal cavity b hernial sac neck and fundus c hernial canal d hernial contents w mass exerting pressure x diverticulum y cicatricial contraction z rent in sac

As to prognosis it is well to remember that the passing of each succeeding hour with strangulation unrelieved portends a decreasing chance of recovery and an increasing probability of a tedious convalescence in case of survival In violent cases after twelve hours and in all cases after twenty-four hours, the mortality is increased by further delay at an alarming rate

Strangulation is more common and more rapidly fatal in enterocele than in epiplocele or in entero-epiplocele It is also more common in small and recent hernias than in large and old ones Femoral strangulations have a larger mortality than inguinal types To illustrate I shall describe two cases of strangulated femoral hernia referred to me by Dr Van der Slice of Cheneys, Neb

CASE 1—April, 1905—Patient, a farmer's wife, of middle age had been afflicted with a small femoral rupture for two years At 9 o clock one morning she noticed that her rupture had come down and could not be reduced Dr Van der Slice was called and taxis tried without avail I saw the case with the doctor at 6 p m We decided to prepare and operate immediately, if taxis under anesthesia would not relieve her By 8 p m we were ready having improvised baking pans for sterilizers and pie pans for instrument trays The patient was rapidly getting worse Dr Myers of Bennett and

*Read at the Johnson County Medical Society annual meeting Jan 15 1907 Tecumseh, Neb

1 Agnew's Surgery

2 Hancock on Strangulated Hernia

ministered chloroform and taxis was tried for five minutes with negative results The tissues were incised down to the hernial sac and bloody serum was encountered both outside and inside of it. A small knuckle of ileum was found badly strangulated and of a dark purple color Hey's ligament was cut to release the constriction at the external femoral ring, and the bowel drawn out. Although the intestine had been strangulated for only twelve hours, the state of affairs within and about the sac indicated that gangrene would have set in shortly It was decided to replace the loop within the abdomen The femoral canal was obliterated by four interrupted sutures through the deep crural arch above, and the tissues over the ramus pubes below The wound was closed under aseptic conditions and the patient made an uneventful recovery

CASE 2—December, 1906 A farmer's wife, of middle age, with large irreducible femoral hernia of twenty five years' standing, was taken sick with the usual symptoms of strangulation. At the end of twenty four hours Dr Van der Slice was called At the end of thirty six hours, consultation was held and immediate operation urged The patient grew worse steadily I operated toward the end of the second day without attempting taxis The sac was large and filled with omentum and a large loop of sigmoid colon. There was some clear serum in the sac. The bowel and omentum were partially but not severely strangulated The neck of the sac was large and the omentum firmly adherent to three fourths of its circumference It was necessary to cut the deep crural arch slightly to reduce the bowel The omentum was ligated, amputated, and the stump of it sewed within the femoral canal, making as it were a new septum crurale The wound was closed as in the preceding case. The patient has recently recovered after a complicated postoperative course.

The strangulation in the first case, a small enterocele of two years' standing, was much more complete than in the second case, a large entero-epiplocele of twenty-five years' standing In the latter case the strangulation was precipitated by the slipping down of intestine into a sac already filled by an irreducible mass of omentum

If omentum alone is strangulated, the case may result in recovery with an irreducible hernia But since it is impossible to know that some part of the bowel is not included, we must treat each case with those prompt and often radical measures necessary to the saving of life in strangulation of the bowel. Unrelieved strangulation of the bowel means certain death.

As to treatment, it is best at the outset to throw a bomb shell into the midst of those who have it in hand to say what shall be done by telling them the patient will shortly die unless relieved If they doubt you, call for intelligent counsel, and go about your task

After the diagnosis, determine whether it is a case for taxis or not, bearing in mind the following contraindications 1, When taxis has already been thoroughly tried, 2, when the case is extremely acute and violent, 3, when several days have intervened, 4, when dealing with an irreducible hernia, 5, when stercoraceous vomiting occurs, 6, when there is a suspicion of inflammation or gangrene, 7, when a skilful and clean operation can be immediately performed

Taxis can not be done thoroughly without a general anesthetic Place the patient in such a position that gravity favors reduction If an inguinal hernia, flex the pelvis and thorax ventrad to relax the anterior abdominal wall If a femoral hernia, the leg of the same side should be partially flexed, adducted and rotated inward to relax the fascia lata The tumor should be drawn down in a line with the long axis of the canal transmitting the hernia. Then, while firm, continuous, even pressure is ... to direct the contents of the sac in a line per... thus to the plane of the opening through which t... bilateral pass, traction enough should be made on t... out the folds into which it may be thrown at the neck The fingers of one or both hands should be so applied as to mold the part which must first pass the constriction into that form most favorable to its return Taxis should not exceed ten minutes, for he who persists unduly will be inviting death oftener than relief If taxis fails, immediate operation should be carried out under aseptic precautions, in order that the hernial canal, the sac and its contents may be dealt with as they severally require

When the hernia apparently has been reduced by taxis, and symptoms of strangulation continue, one of the following conditions may be present

1 Another strangulated hernia
2 Strangulation within the reduced contents
3 Paresis of the released intestine.
4 Reduction *en bloc* (Fig 7)
5 Reduction beyond the first but not beyond the second narrow where strangulation persists
6 Presence of strangulation in an interstitial diverticulum of the sac
7 Eruption of the hernial contents through the sac into the interstitial tissues of the abdominal wall

The situation must be met by eliminating the possibility of another strangulated hernia, and operating according to indications If it is probable that the hernial contents have not entered the abdomen, they can be exposed by an incision over the hernial tract. If they have entered the abdomen, a median laparotomy incision will, as a rule, be most serviceable

Following actual relief of strangulation by taxis, other serious conditions may arise Chief among these are peritonitis and hemorrhage. Such unfortunate occurrences may be due to direct injury from rough handling of the hernia, or to the fact that necrosis or active inflammation had actually set in before reduction Again, these conditions are surgical and must be met promptly as the special case demands

Finally, to the end of saving life in this crisis, let us bear in mind the words of Macbeth that

> If it were done, when 'tis done, then 'twere well
> It were done quickly

VASCULAR LESIONS OCCURRING SUBSEQUENT TO ABDOMINAL SECTION *

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There are three bounden duties which the conscientious up-to-date surgeon feels called on to fulfill These are, first, preservation and publication from time to time of accurate and authentic records of his work, second, the publication in the current literature of all anomalous and unusual cases, or cases of extraordinary interest, which chance to fall in his way, wherefrom the collators of the profession may eventually cull some previously unknown fact or arrive at more or less positive statistics of the rare condition, third, and morally foremost, careful reports of accidents that have occurred in his hands in order ... himself may profit by the less... om, but that the profes... directly, may ... d information ... for this article ... I report them,

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of the condition In the first place there must undoubtedly supervene immediately on the ligation of the vessels, with the consequent break in the arteriovenous circle, a temporary stasis in the pelvic circulation on the side involved, with more or less distension of the veins of the corresponding pampiniform plexus This condition may even advance to a decided varix of the broad ligament The intravenous tension is thereby vastly increased, and any vessel, the weakest point in the circuit, may yield to the pressure

In the second place the removal of these large pelvic tumors is followed by a decided diminution in the intra-abdominal pressure There is produced at once an accentuation of the intravascular pressure, and this steadily increases up to a certain point as the patient rallies from the surgical shock. This necessarily contributes to the strain thrown on the broad-ligament veins, which, as has been amply demonstrated by the pathologists, suffer during the development of the tumor, more or less thinning of their walls, which in many instances are reduced to but a single layer— the intima This thinning, which constitutes the third factor in the production of the rupture is, in reality, the primary and leading cause of the grave accident

It will be well to note at this point that while the patient is in the Trendelenburg position the pelvic intravascular pressure is considerably lessened, so that a tendency to bleed from an obscure open vessel or from torn adhesions may not be evident until the table has been lowered This fact was first noted publicly by Buckmaster,[1] of New York, and has since been confirmed by other operators The obvious deduction is that the abdominal incision should not be closed until an ocular inspection of the cavity has been made after lowering the patient to the dorsal position

It will not be inopportune to put myself on record as saying that I do not think that the blame for such a grave accident as primary hemorrhage from slipping of the ligature should be attributed so much to the material used as to the method employed in the ligation There are distinguished surgeons throughout the country who, in all their abdominal work, employ nothing but chromicized catgut and who seldom if ever have to report a slipping or too speedy absorption of the gut Again there are other surgeons, just as able and distinguished, who employ silk only with equally excellent results It is not the material but the hand that uses it. The ablest surgeon may mistake the degree of tension he has exerted in tying the knot, and the trusted and most thoroughly prepared and tested gut may yield or become absorbed before the allotted time In either case the result is the same, and the surgeon and patient both suffer

Secondary postoperative hemorrhage is of rare occurrence and can result only from absorption of a catgut ligature as in a case recorded by Howard Kelly,[2] in which the bleeding occurred on the eighth day, or from sloughing of the devitalized pedicle, as after the use of clamps or charring of the stump

To review, from what we have seen thus far we may classify postoperative hemorrhages as primary and secondary Primary postoperative hemorrhage may be intraperitoneal due to (1) slipping or loosening of the ligature, (2) oozing from large raw surfaces, such as are present in incompletely removed growths or from extensive adhesions to omentum and peritoneum, (3) spontaneous rupture of the pelvic veins from increased intravascular pressure with lessened resisting power in the vessel walls, (4) subperitoneal hemorrhage from imperfect ligation of the connective tissue or peritoneum over and in front of the open mouth of a retracted vessel The hemorrhage in the latter case, as Voiturier[3] has indicated, may be limited and encysted, in which case the blood collects in the cellular tissue of the broad ligament to form a hematoma, or it may flow freely from the vagina

In any case of bleeding if the hemorrhage has been excessive the danger ensues from the lowering of the blood tension because of the loss of fluid rather than from the diminution in the number of blood corpuscles Hence the value of physiologic salt solution, by the use of which the lowered tension can be speedily corrected, the fluid being injected intravenously or by hypodermoclysis, or both, as in the case reported

THROMBOSIS AND EMBOLISM.

History—I operated on Miss C, aged 26, in March, 1906, for cystic degeneration of the left ovary The organ was considerably enlarged and sensitive, and especially painful during and after the menstrual periods This condition had persisted for some years, and as the severity of the attacks was steadily increasing, relief was sought in extirpation of the painful gland. The operation was a simple one and unattended by any complications There was but little visceral manipulation, although the broad ligament was tense and the appendage could be brought into the operative field only with difficulty The convalescence was perfectly normal until the eleventh day, when some pain was complained of in the right thigh, and this soon extended down the leg An examination revealed a slight puffiness around the ankle and some tenderness over the femoral vein The swelling soon involved the entire limb, but at no time did it reach an extreme degree There was an increase of from two to three inches in the circumference of the leg, but the tissues were not tense nor did the limb present the characteristic milky whiteness of the typical phlegmasia alba dolens The temperature never reached the 100 F mark, but the pulse was considerably accelerated, ranging from 95 to 110 beats a minute The usual course of treatment for phlegmasia was instituted, namely, absolute rest and elevation of the limb, which was wrapped in cotton, on pillows The swelling gradually lessened and beyond the protracted stay in bed no other abnormal features marred the progress of the case

Here was a typical though light attack of right-sided phlegmasia alba dolens occurring after a simple left salpingo-oophorectomy without complications There had not been excessive handling of the parts, there were no clinical symptoms of septic infection, the operation had not been prolonged nor severe and hemorrhagic, and the patient was not unusually anemic or run down in general health There had been, however, some considerable traction on the left broad ligament, and presumably on the uterus and opposite broad ligament, in order to bring the diseased appendage into view

Krusen[4] of Philadelphia has called attention to the scantiness of the literature on the subject of postoperative thrombosis and embolism, and he has emphasized a fact which is demonstrated by my case, namely, that in almost all the cases recorded in the literature the symptoms have developed uniformly when the patient was doing well, and often when the cure was considered complete This is especially true of the reported cases of embolism, which, almost without exception, have developed with appalling suddenness in patients who were thoroughly convalescent

1 Ann. of Gyn and Pediat., May 1894
2 Med Record June 8 1901
3 Jour d Sci Med Lille, Jan 25 1902.
4 Am Jour Obst., 1906 liii 478

The frequency of postoperative thrombosis is not great Many surgeons fail to see a case in an experience covering many hundreds of operations Schenck was able to gather the records of but 48 cases of thrombosis in 7,130 gynecologic operations—about 6 of 1 per cent of the cases Dearborn[5] holds that thrombosis and embolism are more common after operations in the pelvis than after operations on any other portion of the body It is well known that embolism has not infrequently been noted after operations on the appendix, but what there is in pelvic and abdominal operations to favor the development of thrombosis and embolism still remains one of the unsolved mysteries of the surgical art Dearborn suggests that in all probability some of the cases of embolism are overlooked, and that it is possible that many of the cases of pleurisy, pneumonia and pulmonary abscess, following surgical operations, are the direct result of minute embolic obstruction in the parts Since it is well known that the commonest seat of aggravated and fatal embolism is the pulmonary region, this suggestion is very pertinent.

The causes of postoperative thrombosis have not been definitely ascertained for all cases There are undoubtedly some factors that are positive in their etiologic relationship to the condition Thus, there can be no doubt that some cases follow a mild degree of septic infection, due to some error in the technic of the operation To conclude, however that every case of phlegmasia following abdominal section is septic in origin is, in the highest degree, erroneous The absence of fever in many of the cases—as in the one I have reported—would in and of itself indicate that it was probably a non-septic condition

Another strongly predisposing factor in the development of thrombosis is prolongation and severity of the operation, especially when the hemorrhage has been considerable Thus Agnew in his "Surgery" remarks that "After operation in which much blood has been lost, there is always more or less tendency to the formation of coagula This may take place in the vessels of the extremities" In the case just reported the operation was not prolonged nor severe, nor was there the loss of a teaspoonful of blood Therefore this second factor must be eliminated in this case It is interesting to note in regard to this etiologic factor of an increased tendency to the formation of coagula, that recently M Schwab[6] has stated that a study of the coagulability of the blood in 30 patients failed to show any appreciable difference in the time required for the appearance of threads of fibrin in the hanging drop of blood in patients who afterward suffered from embolism and in the blood of those who did not. This only demonstrates the fact that our knowledge of the interesting study of coagulability of the blood as of leucocytosis and other seemingly important subjects, is still exceedingly limited

Anemia and cachexia in association with malignancy, injury to the large venous trunks by too forcible use of retractors ligation of a vein close to the point at which it enters the main venous trunk with extension of the clot into the larger vessel the prolonged use of the Trendelenburg position[7] altered metabolism due to peritoneal exposure and manipulation, and injury of the fine sympathetic nervules—all these have been suggested as possible causes of pelvic and femoral thrombosis following abdominal section The truth is that with the exception of the comparatively small percentage of the cases resulting from sepsis, hemorrhage and severity of operation, we do not yet know the true etiologic history of this curious and frequently serious or fatal condition Here is opened up a field for interesting original research work The compilation and tabulation of all recorded postoperative cases of thrombosis might show some hitherto unrecognized fact that would do much to clear away the obscurity that at present veils this interesting surgical complication With our present limited knowledge of the subject, many of the cases can not be ascribed to any of the possible causes that have been offered in explanation of the occurrence of the accident

In regard to the symptomatology of thrombosis as Mahler has indicated the most important phenomenon is a persistent frequency of the pulse rate out of all proportion to the elevation of the temperature Dearborn in his able resume of the subjects, remarks that any sudden increase in the pulse rate during convalescence from an operation, the temperature remaining about normal, should lead one to think of the possibility of the development of a thrombosis He further adds that if there are evidences of phlebitis or thrombosis absolute rest in bed must be insisted on Here he hits on the main element in the treatment of the condition Absolute immobility of the affected limb external warmth emollient and antiphlogistic applications along the course of the thrombosed vein and thorough asepsis of the primary wound comprise about all that can be done to relieve the patient.

5 Ann Gyn and Pediat November 1904
6 Münch med Wochschr November 1906.
7 Strauch Centrbl f. Gynak xiii 1894

THE ACTION OF THE EXTRACT OF THE SUPRARENAL GLAND AND THE METHOD AND INDICATIONS FOR ITS USE

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The value of the extract of the suprarenal gland as a topical application to the mucous membranes, especially of the nose and throat is well established Recently it has been employed extensively in a variety of different conditions, those deserving special mention being cardiac insufficiency hemorrhage, bronchial asthma and in the treatment of various exudates and transudates in the body cavities As it is a drug with a very decided physiologic action we should be familiar with its effect and indications for its use

PHYSIOLOGIC ACTION

Inasmuch as adrenalin has been employed in most of the experimental and clinical work this term will be used, bearing in mind however, that the active principle under various other trade names has the same effect

The action of adrenalin in general simulates that of electrical excitation of the sympathetic nerves So exact is this selective action that it is assumed that an organ contains sympathetic fibers if it contracts under the influence of adrenalin as plain muscle without sympathetic fibers is not affected In the past it has been disputed whether this action on the sympathetic was central or peripheral At present it is generally conceded that the action is a peripheral one affecting the neuromuscular function The most important action of adrenalin is on the cardiovascular system the effect produced being the same as would follow electrical excitation of the sympathetic Three minims of the 1-1000 solution injected intravenously into a rabbit within thirty seconds will cause a rise in pressure of from 40 to 80 millimeters of mercury This maximum pressure is only maintained

for twenty or thirty seconds, then gradually falls, reaching normal in from two to five minutes This return to normal is not due to disappearance of the adrenalin, but to fatigue, as it has been shown that the blood of the animal, even thirty minutes later, if injected into another rabbit, will produce the typical rise in pressure If a rabbit receives repeated doses at short intervals the pressure effect will be less and less marked until finally scarcely any reaction occurs However, by continuous intravenous transfusions of very dilute solutions, from 1-500 to 1-1,000,000, a moderate increase in pressure, as shown by Crile,[1] may be maintained for several hours The increase in pressure is due chiefly to vasoconstrictor effect, partly to its direct accelerative action on the heart, very soon, however, a peripheral nervous impulse slows the heart by overpowering the acclerative influence of the adrenalin Later when the pressure begins to fall the acceleration reappears and may continue for some time after the pressure has reached normal

Plethysmographic tracings, during the period of high pressure, show that the output of blood at each contraction is considerably increased, indicating dilatation of the cardiac chambers, due to inability of the right ventricle to empty itself completely against the increased resistance So great may this resistance become that the serum is forced out through the thinned ventricular wall into the pericardial sac, as first mentioned by Oliver and Schafer and which I have observed in one rabbit after a fatal dose The venous pressure rises very slightly In the various vessels the degree of constriction is in proportion to their sympathetic innervations According to Schafer, the coronary vessels do not take part in this constriction on account of the absence of vasoconstrictor fibers Brodie and Dixon[2] believe they have demonstrated the absence of sympathetic fibers in the lesser circulation in the lungs, as they maintain that these organs are not constricted by adrenalin This very important point from a therapeutic standpoint has been disputed by Plummer and must be considered as still in doubt

METHOD OF ADMINISTRATION

Large amounts may be given by mouth without any demonstrable effect on the cardiovascular system I have administered 5 c c at a single dose to an adult without any subjective effect or increase in pressure that could be detected with the Stanton instrument, although taking the pressure every two minutes for the period of one hour D'Amato[3] has shown that very large doses given in this manner to rabbits do not increase pressure, although they may cause arterial degeneration It is evident that the only indication for adrenalin by mouth would be for its local effect in hemorrhage from the esophagus or stomach It is valueless given in this way in intestinal hemorrhage on account of the readiness with which it is decomposed in the stomach Applied to the mucous membrane it does not usually have any constitutional effect, the action being entirely local Bennett,[4] however, recently reported marked cardiac disturbance with pulmonary edema after a urethral injection absorption probably taking place through an open vessel Freely applied to the nasal mucous membrane of man or rabbit, it does not cause a rise in blood pressure This is explained by the local vasoconstrictor action being so great that an insufficient amount of the drug reaches the general circulation

The results of subcutaneous injection are not uniform The general opinion has been that when administered in this way the drug does not cause a rise in pressure. Recently in going over this work experimentally I found that in some rabbits doses of 1 c c were without effect, in other rabbits the same amount would cause a very marked rise in blood pressure, the curve being different from that of intravenous injections The first effect is observed about one minute after injection, when a very gradual rise begins, the maximum of from 30 to 40 mm is reached in from three to five minutes, gradually reaching normal in from twenty-five to thirty minutes Meltzer[5] has obtained these same results, but is inclined to believe that in the cases in which a rise occurs the needle has entered the muscle. I have observed a marked rise, however, when exercising special care in introducing the adrenalin, and believe that subcutaneously an increase in the general blood pressure often occurs I have obtained similar results in man when using subcutaneous injections In eight cases, using 1 c c, in which careful blood pressure observations were made, seven responded with a rise in pressure of from 10 to 45 mm of Hg, the first effect being observed in about one minute, the maximum in from three to four and one-half minutes, the maximum was maintained for from eight to eighteen minutes, the return to normal requiring from twenty-six to forty-five minutes In one patient a nephritic with a normal pressure of 150 mm, no rise occurred

Intramuscularly, as Meltzer has shown, there is always a decided reaction The rise is more gradual than after the intravenous injection and much more prompt than after its subcutaneous use The duration and action is also considerably greater than after its intravenous injection We see, then, that a cardiovascular effect can only constantly be expected after subcutaneous intramuscular or intravenous use of this drug When considering its application in cardiovascular conditions, the best method of administering it in any special case will be discussed

USE IN CARDIOVASCULAR CONDITIONS

On account of its marked vasoconstrictor action the field of its greatest influence is conditions in which there is marked vasodilatation with good heart muscle This latter should be emphasized, as the sudden increased work can only be borne by a good heart These indications are present in chloral poisoning, shock and heart failure in chloroform or ether anesthesia Under these circumstances there is a very low blood pressure, due largely to vasodilatation Gottlieb[6] has shown that when a rabbit has received increasing doses of chloral until the heart comes to a standstill the injections of suprarenal extract will start the heart beating and maintain it for from 20 to 30 minutes, and by repeated injections it may be kept beating for hours Even when the heart had stopped beating five minutes, by injecting adrenalin and compressing the thorax he was able to start it again, and in one minute to have a blood pressure of from 50 to 60 mm Hg In man, when using adrenalin for this purpose, the drug should be given intravenously in from 5 to 10 minim doses, repeated as often as required, or better, continuing intravenous transfusion of normal salt solution in strength of from 1-50,000 to

1 Jour Exp Med., viii 713
2 Eng Jour Phys xxx p 476
3 Berlin klin Wochschr 1906 p 1100
4 The Journal A. M. A. Nov 17 1906, p 1653
5 Meltzer and Auer Jour Exp Med 1905 p 114
6 Arch. f. exper u Pharm xxxviii and xliii.

1-100,000 Gottlieb has shown that adrenalin is far superior to digitalis under these circumstances Crile has demonstrated its value in surgical shock Miles and Muhlberg caused vasomotor collapse in a rabbit by giving ether, and were able with adrenalin to cause a very prompt and marked rise in pressure, which persisted for five minutes or until the danger was past In shock and in chloroform and ether poisoning the drug should be given intravenously For the former, as a prolonged action is needed, continuous intravenous transfusion of a solution of from 1-50,000 to 1-100,000 is most desirable With the latter a single injection of 10 minims of the 1-1000 solution should suffice We have here probably the field of greatest usefulness for adrenalin In these conditions it is a safe remedy and probably of much greater value than strychnia or digitalis

When we consider its use in the heart failure of acute infection it is quite another problem Here vasomotor paresis probably plays a very important rôle We have also however, a degenerated heart muscle and it is, furthermore, not a question of maintaining the circulation for a few minutes, but for hours or even days Under these circumstances the intravenous use of adrenalin by its vasoconstrictor, throws such an enormously increased work on a diseased heart that acute dilatation with fatal termination may follow Gottlieb has demonstrated this in a rabbit that received daily doses of diphtheria toxin until evidence of cardiovascular disturbance appeared An injection of adrenalin then raised the pressure from 56 mm Hg to 132 mm , and maintained it there for a short time It then sank lower and lower, a fatal termination being reached in a few minutes Here the first result was apparently beneficial, but the heart was unable to maintain this increased work and dilatation and death followed The same results were obtained in animals poisoned with phosphorus If adrenalin is allowable at all in this group of cases it should be administered subcutaneously as the increase in pressure is then much more gradual

At the recent meeting of the Association of American Physicians there was considerable discussion on its value in acute pulmonary edema Experimentally it is well known that the usual cause of death in rabbits after an excessive dose is acute pulmonary edema Bennett[4] has recently reported acute pulmonary edema in man after a urethral injection of 2 c c of the 1-1000 solution It can, therefore, scarcely be considered a safe remedy in this group of cases

VALUE IN STOPPING HEMORRHAGE

Here I shall only consider the value of this drug in hemorrhage from vessels not accessible to local applications, as in the lung or intestinal tract Adrenalin may check hemorrhage not only through its constrictive action but also by increasing the coagulability of the blood The latter action can be readily demonstrated after intravenous injection At first thought it would appear that we have here an ideal hemostatic Its constrictor action however is more than counterbalanced by the sudden increase in pressure In rabbits I observed that in a wound the vessels that have stopped oozing often start bleeding after an intravenous injection of adrenalin It is also not an infrequent occurrence to have a canula forced out of the carotid immediately following the use of an intravenous injection In pulmonary hemorrhage there is the additional danger of possible absence of vasoconstriction and therefore the bleeding might increase by having a condition of dilated vessel with increased pressure Its action in stopping hemorrhage by increasing the coagulability of the blood may be more safely and effectually induced by calcium chlorid or gelatin, neither of which increases blood pressure The use of adrenalin in controlling distant hemorrhage should be discouraged as it probably does harm as may any substance that increases blood pressure This has led Smith, Hare,[7] Lemoyez and others to advocate vasodilators in controlling distant hemorrhage

USE IN BRONCHIAL ASTHMA

The use of adrenalin by subcutaneous injection in controlling asthmatic attacks is of recent date although applied to the nasal mucous membrane, it has been employed for this purpose for several years Kaplan[8] has reported very favorably of its action in relieving the asthmatic attack The dosage is from 5 to 15 minims of the 1-1000 solution subcutaneously or intravenously During the past year I have used adrenalin in eight cases of bronchial asthma with very satisfactory results In all these cases marked relief appeared in two or three minutes and continued for three hours Some of these cases were of long standing and the patients had employed all the ordinary remedies, but, according to their statements, none afforded such prompt and complete relief as adrenalin From tests with other substances I am quite convinced that the results are due to the specific effect of the drug and not to any suggestive action In none of my cases could I observe any curative effect, the attack occurred at the usual interval and with the same intensity One patient during a period of eight months received 100 injections always with relief, no increase in the dose being necessary In none of the cases could I observe any untoward results J A Capps, however, in personal communications, reports serious cardiac disturbance in an elderly person immediately after an injection for asthma, and its use here should be restricted to patients with good heart and blood vessels The action of this drug on asthma may throw some light on the nature of the pathologic process It is difficult to conceive how adrenalin can relieve a bronchial spasm, one can more readily see how a hyperemia of the bronchial membrane could disappear under its vasoconstrictor action

USE IN PLEURAL AND PERITONEAL EFFUSIONS

Barr,[9] in 1903, after withdrawing fluid from the pleural cavity of a patient suffering from carcinoma of the lung, introduced a solution of adrenalin through the canula and was surprised to find that the fluid did not reaccumulate He then tried it in tuberculous pleurisy, tuberculous and malignant peritonitis and in ascites due to cirrhosis His method was to withdraw the fluid, then introduce through the canula 5 c c of the 1-1000 solution of adrenalin diluted to 15 c c with sterile water After injection into the peritoneal cavity he used light massage to facilitate its distribution Plant and Steele[10] following this method, treated three cases of liver cirrhosis and two of pleurisy Two of the patients with ascites received one treatment, the other one received two following which the accumulation of the fluid stopped One patient later relapsed and was again relieved after one injection The two patients with pleurisy each received one treatment and no reaccumulation occurred

7 Lancet Nov 14 Aug 20 and
8 Medical News 190[illegible] p [illegible]
9 Editorial This Journal [illegible]
10 Brit Med Journ Jan 1[illegible] 1

These cases at the time the report was made had only been under observation a few months, too early to draw conclusions as to the permanency of the result Barr reports untoward results in one case in which he injected 3 c c of a 1-1000 solution into the pericardial sac, after withdrawing 600 c c of fluid The pulse disappeared at the wrist and for a short time the patient's life was in imminent danger Plant reports colic and a rise in temperature of 2° F after its intraperitoneal use Exner,[11] and Meltzer and Auer,[5] working with animals in order to determine the effect of adrenalin in preventing absorption and transudation in the peritoneal cavity, obtained results which lend plausibility to Barr's empirical treatment. Exner, in 1903, demonstrated that the intraperitoneal injection of adrenalin delayed absorption of poison from the peritoneal cavity He injected into the peritoneal cavity of a rabbit 20 times the fatal dose of strychnin, preceding it by adrenalin, the tetanic convulsions being delayed fifty minutes and were much milder than in the control Meltzer and Auer confirmed these findings They also showed that fluorescence transfused from the blood into the peritoneum much more slowly in animals that had previously received adrenalin intravenously It has also been demonstrated that intraperitoneal injection of adrenalin will lessen the tendency of transudation into the peritoneal cavity after excessive transfusion of normal salt solution

DANGERS OF ADRENALIN

The special dangers attending the use of adrenalin besides those already mentioned are rupture of an artery from the sudden increase in pressure, glycosuria and arterial degeneration

It is a remedy that must be employed with great care in all patients with suspected arterial degeneration In elderly people, both on account of atheromatous arteries and myocardial changes, it is a dangerous remedy Kaplan[8] has found that glycosuria does not occur after moderate dosage He observed on twelve patients the effect of a daily dosage of from 30 to 40 minims continued for two weeks and never detected any glycosuria Underhill[12] has reported that repeated doses of adrenalin finally fail to produce a glycosuria in rabbits, a certain degree of tolerance being acquired. The danger from this source is very slight and may be overlooked Much more important is the possibility of causing an arterial atheroma In rabbits it has been found that a single intravenous injection may cause decided changes in the media and its continued use destruction of the muscle fibers and later calcification It has, furthermore, been shown that these same changes may be produced by administration of large amounts by mouth or subcutaneously We must not conclude, however, that its use in man with the usual dosage is necessarily attended with the same danger We have reasons to believe that the rabbit is especially prone to such changes, as an attempt to produce these in some other animals, as dogs and monkeys, have failed A variety of substances, some of them well-recognized therapeutic agents, as barium chlorid, physostigmin, lead and digalen, will produce these same changes in rabbits, and further experimentation would probably show that this list can be added to It is probably true, however, that these changes are more readily brought about by adrenalin than by any other substance employed up to the present time Again the dosage per kilo, when used subcutaneously, is fifty times our therapeutic dose in man When we consider that subcutaneously in animals the majority of investigators have never been unable to produce vascular changes, it would appear that the danger of the drug in this respect could easily be overestimated Its continuous intravenous use should be discouraged It is not probable that a single intravenous injection would cause vascular changes, although it has been shown that this may occur in rabbits, the real danger attending its use, however, is immediate cardiac disturbance, especially acute dilatation

11 Arch f exper Path. u Pharm 1903 p 313
12. Amer Jour Phys., xvii, p 42.

OCCUPATION IN THE TREATMENT OF THE INSANE *

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It will not be possible for me to consider this subject at length, but I wish to urge persistent effort in devising ways and means to find employment of a suitable kind for the insane I do not pretend to add anything of importance to what others have said on this topic, and it is not unlikely that any one will object to my according a great deal of importance to occupation as a remedial measure for the insane, but I hope that I may be able to direct attention more strongly to the desirability of prescribing this valuable remedy in a more systematic manner

Some authorities say that great care should be taken to assign patients to labor similar in character to that which they are accustomed to perform. Surely this is not wisdom. A patient comes from the counting house fairly saturated with the toxemia of figures He has spent his days—and often, it may be, a considerable portion of his nights—in struggling with great and perplexing problems, as a result of which there is a failure of his physical health and a more or less complete shattering of his nervous system To ask such a patient to perform any sedentary duties would be but adding fuel to the fire already consuming his nervous vitality

Better far to start this patient at some occupation requiring little or no mental exertion Send him out in the open air where he will be surrounded by conditions favorable to health, and give him a hoe, a spade, or a rake, and see that he is kept in motion. Do not attempt to explain what he is expected to accomplish The great majority of patients will attempt to use any utensil of this kind as soon as it is placed in their hands They appear to work automatically, little or no mental exertion being required The power of observation appears to be aroused and developed, slowly it may be, but steadily A simple hole is perhaps made in the soil and the patient proceeds either to enlarge this opening or fill it in or build a mound He will continue this occupation, apparently forgetful of his delusions, for a time, but suddenly the abnormal ideas return and any attempt at occupation ceases Here is where the properly trained attendant is able to render valuable assistance. He has, or should have, a good knowledge of the temperament of his patient and can, by tact and patience, encourage him to recommence his work. It was a revelation to me to notice the progress made by patients from day to day At the outset perhaps a few minutes would represent the time spent in work, but this time is gradually extended until a patient may continue his occupation for an hour or longer,

*Read before the British Medical Association Toronto

apparently unconscious of his surroundings and forgetful of his delusions Of course, even after the patient has made progress and understands the nature of the work in which he is engaged, and why he is asked to perform it, he may become obstinate and refuse to do more. In such an event no force should be used Allow him to remain indoors or to spend his time with the walking parties, etc., for days, if necessary, and await confidently the time when he not only consents to accompany the working parties, but expresses a desire to do so

I might cite a number of cases to explain more fully what I desire to express, but time will not permit This case, however, will interest you

A young man, in the prime of life, was sent to the hospital for treatment. He was the most perfect specimen of physical development that I have ever seen He was brought in on a mattress to which he was firmly bound This patient had occupied a position of great financial responsibility, and filled with an energetic young man's determination to master all the details of his work he spent day after day and many a night at his desk His domestic environments were such that he was denied rest even when he tried to obtain it, and he never thought of recreation His general health became impaired, followed by a complete mental breakdown After his admission he would destroy his bedding, clothing and everything he could lay his hands on. He went on all fours and fancied he was a ferocious animal in a cage, and sniffed and snapped at everyone. He continued in this way for some time with little if any improvement, although his condition varied somewhat from time to time. Spring came, however, and instead of looking for some occupation befitting his condition in life, he was provided with a spade and sent out with the working gang He was dull and stupid and seemed to move about mechanically He soon began, however, to use the utensils supplied him and in less than a week I was surprised and delighted when he asked me to sit with him under the shade of a tree, as he had something to say to me For the first time since he came to the hospital, more than three months previous, he appeared to realize that something was wrong and asked for an explanation, but the mental cloud was yet too dense to make him understand. I had previously ascertained that this patient had a hobby for gardening in his spare time, and it would appear that even in his afflicted condition enough of his old inclination remained to induce him to persist in his work He made a good recovery and subsequently resumed his former occupation

This case has impressed me with the necessity of studying the temperament of a patient before selecting his occupation and of endeavoring to obtain as much information as possible regarding the previous history, not forgetting the whims and fancies

I will cite one more case to point out the danger in allowing a too great time to elapse before placing a patient at work

A male patient, aged 30 years, was admitted suffering from acute mania He fancied he was charged with electricity and was alarmed lest he might unintentionally injure his friends He was very irritable, attacked the other inmates and was considered a dangerous patient He became a great nuisance on the ward and was sent out under the care of an experienced attendant, who with nine other patients, were engaged in grading He commenced to improve at once, forgot his delusions and ceased to provoke trouble while indoors In a short time he was discharged and has been well for almost two years I am convinced that this patient s restoration to health could not be so completely and quickly effected in any other way

The percentage of patients who are not likely to derive benefit from occupation of some kind is very small, indeed If we exclude those cases who are physically unfit and those who are in the advanced stages of dementia the proportion who are unable to perform work of any kind almost disappears. A considerable number of patients with acute mania are, during the early stages of the disease, unable to perform any labor, but this period of enforced idleness may be very much shortened if careful and systematic efforts are made to ascertain the earliest possible time when simple occupation may be attempted. Paretics, too, during the period of exaltation, are not capable of undertaking work of any kind, but it is not unusual to find them able to perform considerable work later on in the disease. Some patients who have dementia præcox also absolutely refuse to do anything, no matter how persistent our efforts may be

Occupation should be simple at the outset It does not require much mental effort on the part of any patient to push a heavy brush up and down the corridor on the polished floors, and this effort is much less when the patient is only one of a large number moving up and down in the form of a procession. It is little more than an exercise in walking, while it serves as a stepping stone to something more complicated. This simple occupation is continued longer than the condition of the floor requires, the principal object being to endeavor to direct our patients along the line that leads to something better A change to outdoor exercise is made just as soon as the patient is reported as being able to perform the simpler indoor labor with very little direction from the attendant in charge It is true that patients vary much in the time necessary to reach what I may call an "outdoor stage," but the great majority are sure to advance this far

While I think it is unwise to restrict any class of patients to any particular work, nevertheless it is true that certain patients can not be induced to perform any work other than that to which they are accustomed I have in my mind the case of a tailor who was exceedingly dull and sluggish, refused to eat or speak and could be only moved from place to place with difficulty It was useless to attempt to force him to brush or to do anything else, yet when a needle and thread and a piece of cloth was placed in his hands his interest appeared to be aroused and he made some attempt to ply his trade This led to better things, and later on he was sent to the tailor shop where he proved to be a skillful workman Another matter that should never be forgotten is that certain classes of patients should never be asked to perform the more menial services that must always be rendered in every hospital In matters of this kind the same judgment should be exercised in selecting certain persons to fill certain positions as is used in the world at large

Friends of patients often object to the rule in force to induce every person who is physically able to engage in some occupation, and this objection comes from the poor as well as from the rich It is assumed by many that the poor are asked to labor in order to defray the expenses in connection with their maintenance Others assure us that certain patients are under no obligation to labor, as their friends are willing to pay for all they receive It takes a little time and patience to point out to persons making these objections that occupation is a remedial measure and that it must be administered in accordance with the requirements of the patients and under the direction of those who are in charge of the asylum The time occupied in making such explanations is well spent, however and later on we will find that the number of persons objecting gradually diminishes Even now the general public is so impressed with the importance of occupation that complaint is often made when visitors come and find their friends who for some reason may be in the ward, unoccupied

Once the facts that occupation is an important remedy

in the treatment of insanity and that it must be administered in an intelligent and systematic manner, are firmly impressed on the minds of the attendants, little difficulty is found to keep patients employed. Patients who, previous to their arrival at the asylum, belonged to the indolent class and who were never obliged to perform any labor, may consider it a hardship to do so, but they are soon influenced by their surroundings and learn to fall in line and perform such duties as may be assigned to them. The fact that they are not asked or permitted to overwork themselves and that attendants are expected to make their outdoor life as cheerful as possible, robs labor of much that is disagreeable in their minds. Even persons belonging to this class are glad to be permitted to participate in the advantages to be derived from occupation.

My experience has taught me also that it is unwise to offer any pecuniary reward for services rendered by a patient. If this plan is permitted, patients are encouraged to think that they are employed for the benefit of the institution and not for their own good. It also encourages jealousy and serves to engender a general feeling of dissatisfaction and unrest that is not at all conducive to the physical or mental improvement of the patient. A full day's pay is impossible and a lesser amount is unsatisfactory. Better far to eliminate this feature altogether and to encourage the feeling that occupation is the best and most easily administered remedy known to us at the present time.

How does occupation effect a cure? This is not an easy question to answer. Delusions may be nothing more than mental expressions of physical disease. At all events we know that in a large number of cases mental improvement is coincident with the return of physical health. As a result of suitable outdoor employment, we find that patients are less restless, sleep better, their appetites are improved and the secretions become normal. The gentle perspiration helps to eliminate the excess of toxic products and the muscular exercise tends to tire the patient sufficiently to induce quiet sleep. While in the wards, too, they become less noisy, less quarrelsome, less destructive and much better behaved generally. One thing is certain, that the coated tongue, the obstinate constipation, the diminished secretions, the sallow complexion and the other symptoms of ill health that very stubbornly resist other methods of treatment gradually disappear when patients are engaged in suitable occupation and we can nearly always look forward with confidence for a marked improvement in the mental condition.

While I have no objection in stating that the cure of a large number of patients may be attributed to occupation, I am also of the opinion that the greatest good is conferred on the incurable cases by delaying dementia and by adding to the comfort, happiness and general well-being of the chronic insane.

The fact that the employment of patients materially lessens the cost of their maintenance and saves the expenditure of hundreds of dollars annually in the carrying on of the various industries in connection with an asylum for the insane is, of course, a matter of some importance. But when we attempt to consider what the restoration of a patient's health may mean to his family who may be dependent on him for support, or when we try to estimate the value of the happiness that lights up the home when a loved one returns, whose departure has enveloped his own fireside in the shadows of sorrow and desolation and left behind him the fearful dread that he may never recover, when we consider all this we must forget such matters as finance and carry on our various works with the sole object of improving the mental condition of our patients. Our annual reports contain elaborate statements in detail of the handiwork of our patients. We report from 50 to 75 per cent as having been employed and the total number of days labor is very large, indeed. I am inclined to believe that these figures are not always accurately compiled, yet they go to show that a great deal of labor is being performed by patients in the different institutions. But this in itself is not everything. We should endeavor to carry on our work in such a way that every manufactured article will represent in some measure an improvement in the mental condition of a patient, and not a single piece of work of any kind should be placed to the credit of any institution if its performance interferes in any way, with the recovery of a patient.

Much that I have said in this paper applies to amusements and entertainments which I look on as important aids to be employed in connection with occupation.

SUMMARY

1. Only a small proportion of our patients should be exempt from labor.

2. A careful study should be made of the temperament of each patient before deciding the kind of labor suitable in each case, and the previous occupation or social condition should not be the only determining factor.

3. The carrying on of this work successfully depends in a large measure on the attendants in charge. Attendants should be selected with care and carefully instructed.

4. Members of the medical staff should visit the working parties regularly for the purpose of studying individual cases.

5. Patients should never receive wages. It is possible that such a system may appear to work successfully in some cases but in the end it is sure to create trouble.

6. In some cases it is advisable to encourage patients to learn a trade, so that they may the more easily earn their living after their discharge.

7. Agricultural pursuits and caring for grounds appear to be ideal labor for the great majority of patients.

8. Female patients may with advantage be employed in the vegetable and fruit garden, weeding, picking berries, etc., in addition to the work performed in the day rooms, dormitories and dining rooms. They should also perform fancy work, do all the mending, and assist in the industrial department in the making of mats, mattresses, etc.

TUBERCULIN TEST *

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Eight years ago, in a paper on the "Early Diagnosis of Pulmonary Tuberculosis," I made the statement that the tuberculin test had been accepted for testing cattle, but that this procedure would be slow in becoming popular with our profession as a means of confirming or rejecting our suspicions in the human being. It was compared to hunting for a gas leak with a lighted candle.

Having used tuberculin, in its various forms, since it was first brought out, I am more convinced to-day than ever that in tuberculin we have our most efficient remedy in fighting this disease.

*Read before the Buncombe County (N. C.) Medical Society, Feb. 18, 1907.

Experience has convinced me more firmly than ever that its use under proper precautions and with a full appreciation as to its limits and results is justifiable and advisable, while this is true, I am just as firmly convinced that my old comparison of "hunting the gas leak with a lighted candle" is still applicable, but with this addition, experience has shown how better to guard the light. So powerful an agent can be safely used only when the utmost caution is exercised and the indications for its use are given the consideration and attention which they demand

Ten years ago those of our profession who advocated and used tuberculin were few and far between, during the first years of its use (as has been the history of all our greatest medical discoveries) the remedy was abused at the hands of those who employed it in half-moribund patients and in cases in which it should never have been used either as a diagnostic measure or in treatment. To-day we find a majority of the progressive members of our profession using the remedy at least as a diagnostic measure Those who a few years ago were loudest in their denunciations have now become non-committal Ten years more will without doubt convert those who are skeptical to-day

A tuberculin test will frequently clear up the diagnosis in cases in which, without the remedy, the true nature of the disease would otherwise remain obscure until the disease had become more advanced and valuable time had been lost

REACTION TO THE TEST, PROOF OF THE PRESENCE OF TUBERCULOSIS

The fact that animals and human beings will react when no evidence whatever of a tuberculous disease exists (otherwise than found by a tuberculin test) does not prove that a reaction can or does occur without the disease It is well known that a small local tuberculosis may be present in any organ of the body without the patient or physician being aware of its existence It has been claimed that a reaction will occasionally occur in uncomplicated syphilis The more we become acquainted with tuberculin and its action the more certain do we become that we have been lame in our diagnosis, that our powers of discernment and judgment have been at fault, and that a reaction means tuberculosis, no matter whether we find the deposit or not

Veterinarians have been able to satisfy themselves on this point more quickly than we have, from their ability to get a postmortem immediately following the reaction if desirable Were it possible that we also could secure an autopsy in all cases and dissect the body as carefully and in the same detail as does the veterinarian we should undoubtedly find evidence sufficient to convince us that the occurrence of reaction to tuberculin means tuberculosis

The majority of tuberculous foci starting in the human body probably never produce an open tuberculosis A reaction, when such shut-in tuberculosis exists, will occasionally produce sufficient local manifestation (throat, pulmonary, articular or glandular) so that the diseased area may be determined accurately during the reaction

Experience shows that the more recent case will give a stronger reaction to a given dose than will a case of longer standing, further, the more recent case will react to a much more minute dose than will a case more advanced

IN WHAT CASES SHOULD THE TUBERCULIN TEST BE EMPLOYED

In pulmonary work we are constantly finding patients presenting absolutely no symptoms of tuberculosis except a hacking cough, associated with bronchial inspiration, and perhaps prolonged expiration or slight dulness on percussion, the temperature, sputum, history, weight, etc, all fail to aid us in our diagnosis What are we to do ? Wait, as we would do in syphilis, until more positive signs appear? No, it may then be too late or the patient may not return A tuberculin test properly given under such conditions is of the utmost value to both patient and physician

A sputum examination giving negative results in itself, unless repeatedly made, is not an indication for tuberculin All other means of arriving at a correct diagnosis should be employed before resorting to a tuberculin test not that I believe this test is dangerous or that it ever aggravates the disease, but the depression of the reaction fever nausea and other concomitant symptoms are not desirable in any one, and particularly is this true in a patient suffering from tuberculosis The claim made a few years ago by various observers that a reaction excited a latent deposit or developed a quiescent disease into an active one has not been proved by facts and experience

In joint troubles, bone disease persistent wasting without pulmonary symptoms, chronic pleurisy bladder trouble, and especially in adenitis, is tuberculin most valuable as a diagnostic measure It is rarely necessary or advisable to use the tuberculin test in cases running a daily maximum temperature of over 100 F I have never used the test in a suspected case of brain tuberculosis

WHAT TUBERCULIN SHOULD BE USED

After trying several makes and modifications, I have found that the tuberculin made by Koch and imported through Victor Koechl & Co, New York, is the most satisfactory and is apparently more nearly "standardized" than any other

ADMINISTRATION

The temperature of the patient should be taken once in three or four hours for a period of several days before giving the first injection As a rule, I have not used the test in patients having maximum temperature over 100 F Different observers advise dosage ranging from one to six milligrams, some giving the tuberculin in slowly increasing amounts over a period of a week or more, others going to the opposite extreme both in amount used and in the number of injections

While I would not advise the use of the maximum dose as a test measure I believe that the slowly increasing method of administration is faulty in that many individuals quickly acquire more or less tolerance and fail to react (even in the space of a week or ten days) as they would had a larger amount been given earlier

In the average adult I use 2 mg at the first injection, preferably giving it late in the evening continuing the temperature record for two days, if no reaction occurs 5 mg is then given on the third day This plan, in my experience avoids excessive dosage and obviates the possibility of developed tolerance The injections are given with a graduated syringe in the subscapular region the needle being inserted into the deep fascia but not into muscle tissue

The tuberculin is diluted with a 0 5 per cent solution of carbolic acid and distilled, filtered and sterilized

water, little local discomfort results, such hyperemia as follows subsiding in from twenty-four to forty-eight hours

WHAT CONSTITUTES A REACTION

A tuberculin reaction may be either local or general If local, the symptoms may be confined to a small area and consist of congestion, swelling pain, tenderness on pressure, or increased secretion Local reactions, as a rule, are not clearly defined, they occur particularly in adenitis and in disease of the joints and of the larynx, it is not infrequent that increased moisture will be heard over a suspected area in the lung without other change in the character of the respiratory sounds In a general reaction the symptoms may be slight or so severe as to give rise to grave apprehensions on the part of the patient or the friends The symptoms usually occur in from twelve to twenty-four hours and consist of fever pain throughout the body (particularly the back and joints), nausea, vomiting, headache, increased cough and expectoration, restlessness, chill or the ordinary evidence of a common cold Many of these symptoms may be entirely lacking, others existing either slightly or to a severe degree The most distinctive evidence of reaction is usually presented in the change of temperature a variation from one to even three or four degrees from the record for the previous days being taken as a positive evidence, other possible causes, of course, being eliminated

The reaction may be retarded, not coming on until the second day, then appearing suddenly and presenting the most conclusive evidence Even when the reaction is violent the maximum is reached in a few hours, the symptoms then subsiding gradually, so that in twenty-four hours from the outset the patient is again practically normal I have occasionally had my attention called by the test to the larynx, where, beforehand no suspicion of trouble existed, the reaction causing slight or marked local redness with such symptoms as occur in ordinary acute laryngitis Slight chill, a rise of two to three degrees in temperature and more or less aching is the rule, nausea being less frequent and vomiting rarely seen

ALL TUBERCULOUS PATIENTS WILL NOT REACT TO THE ORDINARY TEST DOSE

As has already been pointed out, a recent case, or one presenting but a small or circumscribed deposit, will react more positively than will the usual well-developed case or one in which there is extensive involvement In other words, in the advanced or extensively involved case a certain degree of tolerance is established to tuberculin an evidence that Nature produces in the body the same resistive element (call it partial immunity, if you like) that occurs when tuberculin is used in gradually increasing dosage

WHAT PRODUCES THE REACTION

With all that has been written, following innumerable experiments on lower animals, after the most painstaking laboratory experiments as yet there is no satisfactory explanation for the phenomena of the tuberculin test Empirically we know the results as we do with many remedies, scientifically we are in the dark here as we are with the "how and why" of the action of many of our simplest and commonest remedies

In conclusion I wish to affirm my belief in the efficacy, safety and positive diagnostic value of a properly conducted tuberculin test, and to state that while a failure to react is not proof positive that the disease does not exist, a clearly defined reaction must be accepted as diagnostic proof of the existence of tuberculosis

Special Article

WATER SUPPLY AND PUBLIC HEALTH

CHAPTER I

WATER AND DISEASE *

The causal connection between water and disease has been impressed on the human race by a series of tragic occurrences Throughout the Middle Ages a common explanation of any sudden outbreak of epidemic disease was that "somebody had poisoned the wells," and this unhappy hypothesis often led to a destruction of life which was even greater than that caused by the original epidemic The belief that certain outbursts of a specific disease were somehow associated with drinking water did not, however, become general until about the middle of the nineteenth century, when a number of facts hitherto seen through a glass, darkly, first came into clear view in connection with the causation of Asiatic cholera

(*a*) *Asiatic Cholera*—This disease afforded an early and conspicuous demonstration of the relation between a specific disease and the use of a given water supply The famous case of the Broad Street Pump" in London in 1854 has long been celebrated as an epidemiologic classic[1] It will be recalled that a remarkably concentrated and explosive outburst of cholera occurred among the persons who used the water from a certain well in Broad Street The circumstances surrounding this outbreak were such as to foster immediately the suspicion, even in those prebacteriologic days that the well water contained the specific poison" of Asiatic cholera Fortunately for the advance of preventive medicine, the investigation of the occurrence fell to the lot of several shrewd and competent observers who succeeded in securing convincing evidence, amounting indeed to virtual proof, of the causal connection between the use of the water and the production of infection It is with much reason that some writers date the beginning of modern epidemiology from the inquiry into the Broad Street pump epidemic of Asiatic cholera

In more recent times the connection between drinking water and Asiatic cholera has been graphically shown in the famous Hamburg Altona epidemic of 1892 3 Here similar population groups in the two cities, living under identical climatic and social conditions were most diversely affected The residents of Hamburg were supplied with unfiltered water from the River Elbe and suffered severely while the inhabitants of Altona, who were supplied with filtered water from the same source, remained almost entirely exempt. Topographically and industrially the two communities were under identical conditions the character of the water supply alone determined the presence or absence of infection In those districts in which the Hamburg water mains passed across the boundary line for a short distance into Altona a tongue of cholera infected houses projecting into Altona betrayed the presence of the infected water

(*b*) *Typhoid Fever*—The evidence connecting epidemics of typhoid fever with drinking water is intrinsically more difficult

*[This is the first of a series of articles on the relation of water supply to the public health Succeeding papers will treat of kindred topics such as the methods of sanitary water analysis the methods of water purification and similar themes Many of the existing treatises on water and water supply have been written primarily for the engineering rather than for the medical profession and it has seemed to us desirable to secure a presentation of this subject that shall be of especial value to medical readers In most communities physicians rather than engineers constitute the membership of the local board of health and it is to the former consequently that the public must look for proper guidance in the matter of safe water supply As a matter of fact the water supply problem is often of a hygienic rather than of an engineering character—Ed]

1 Sixth Report of the River Pollution Commission Appendix 10 p 499 An excellent detailed review of this outbreak is given in Principles of Sanitary Science and the Public Health by W T Sedgwick The Macmillan Co 1902

to secure than in the case of cholera, owing to the long period of incubation and the frequently obscure symptoms of the former disease Nevertheless, an overwhelming number of cases is on record in which the association between the use of a particular drinking water and an outbreak of typhoid fever is so direct as to admit of no doubt as to the causal relationship

There is no need to recapitulate here in detail the features of the more familiar water borne epidemics of typhoid fever These are for the most part on file in easily accessible publications Among the classic epidemics may be mentioned the one at Lausen, Switzerland, in 1872, at Plymouth, Pa, in 1885,[3] at Worthing Eng in 1893,[4] at Ithaca, N Y, in 1903,[5] and at Butler, Pa, in 1903[6]

In addition to the evidence afforded by these epidemics of a circumscribed and definite character, there is a large body of evidence, less direct to be sure but very cogent, derived from a study of the typhoid fever death rates in those cities afflicted with more or less polluted public water supplies Attention has often been directed to the low typhoid fever rate in cities supplied with a surface water purified by sand filtration as compared with the higher death rate in cities furnished with unfiltered surface water

TABLE 1

Cities Using Sand Filtered Surface Waters.—Typhoid Rate per 10 000		Cities Using Unfiltered Surface Waters.—Typhoid Rate per 10 000	
Berlin	0 50	Boston	2 79
London	1 40	New York	1 81
Hamburg	0 90	Baltimore	4 70
Rotterdam	0 20	St Louis	4 70

Table 2 shows the death rate from typhoid fever in the principal cities of two large states In one of these states the public water supplies were under the direct legal control of the State Board of Health in the other such authoritative supervision was lacking

TABLE 2.—Average Typhoid Fever Death Rates (1898 1899 and 1900—Fuller)

PENNSYLVANIA		MASSACHUSETTS	
CITY	DEATH RATE	CITY	DEATH RATE
Pittsburg	108	Boston	30
Allegheny	80	New Bedford	30
Johnstown	80	Springfield	26
York	83	Lawrence	25
Chester	64	Taunton	25
Lancaster	59	Brockton	1
Philadelphia	54	Chelsea	24
McKeesport	53	Salem	2
Reading	50	Fitchburg	21
Allentown	49	Lowell	21
Harrisburg	41	Lynn	20
Altoona	33	Newton	20
Wilkesbarre	29	Cambridge	18
Erie	28	Worcester	18
Scranton	23	Fall River	15

An immediate and striking effect on the typhoid fever death rate has often been observed when a city has exchanged a polluted water supply for one of more satisfactory character Thus the city of Vienna between 1851 and 1874 procured its public water supply from the River Danube and during this period the typhoid rate ranged from 100 to 340 In the latter year a pure spring water was introduced and the typhoid rate at once became and has since remained consistently low, averaging only 5 1 in the years 1898 1902 In Chicago the typhoid fever death rate fell to the lowest point recorded in the history of the city in the year (1900) immediately following the opening of the Chicago drainage canal which diverted a large portion of the city sewage away from Lake Michigan the source of the city water supply[7]

A singularly instructive condition existed at one time in the city of Paris The main water supply was obtained then as now from various springs and small rivers and was of fairly satisfactory character but during certain seasons this source proved inadequate and the scanty supply was eked out with water from the polluted River Seine In order that every part of the city should share alike each *arrondissement* was supplied in turn with river water due notice being given through the public press to the residents of the district concerned. That the authorities clearly recognized the situation is shown by fact that if the river water was supplied for more than twenty days of the year the householder had the right to demand a reduction in his water rates (Legge) The effect of the orderly distribution of the Seine water was manifested by a miniature epidemic of typhoid fever which followed the course of the Seine water from one section of the city to another In 1889 an accident occurred to the conduit of the Vanne one of the chief sources of the spring water supply, and all Paris received nothing but river water for five days It is estimated that this caused 1 570 cases of typhoid fever

(c) *Other Diseases*—In addition to Asiatic cholera and typhoid fever a number of other diseases have been attributed with more or less reason to water borne infection Conspicuous among these is the so called epidemic diarrhea Various well defined outbreaks of intestinal disturbance have been traced not infrequently to the use of polluted water An interesting outbreak of a dysenteric affection ascribed to the use of well water has been reported by Lartigau[8] This case is a particularly important one since the micro organism apparently responsible for the infection (*B pyocyaneus*) was isolated both from the discharges of the patients and from the contaminated well water

The most extensive epidemic of this order yet described is one recently recorded by Thresh,[9] which occurred in the borough of Chelmsford, Eng, attacking about 1 400 persons mostly adults and causing 14 deaths The practical limitation of the cases to definite sections of the population first threw suspicion on a certain portion of the water supply The original sources of supply apparently were not exposed to pollution but a small uncovered reservoir was found into which water from a deep well had been pumped and through which it flowed to mix with water from a spring in a large covered reservoir The conditions surrounding the small reservoir are thus described This small reservoir was not bricked above ground level hence during heavy rain water from the ground around would run into it Adjoining one end of this reservoir was a patch of garden ground on which flowers were being grown This I found was manured from time to time with road scraping s The intimate connection between the onset of the epidemic and a particularly excessive rainfall was shown by the fact that the epidemic commenced between July 23 and 25, while the rainfall records show that after three rainless weeks 0 56 inches of rain fell on July 17 0 45 on July 19 and no less than 2 1 on July 23 Table 3 sets forth the relation subsisting between the use of the contaminated water and the deaths from diarrhea.

TABLE 3—Deaths from Diarrhea during Epidemic

5 000 persons not using contaminated water	0
7 700 persons using the contaminated water	14
2 000 persons in the remainder of the union not using the contaminated water	0

Less convincing than such well marked outbreaks are the instances that have been reported in which water borne epidemics of typhoid fever have been preceded by a large number of cases of diarrhea This circumstance has been regarded by some observers as indicating that the ingestion of polluted water causes in some persons a diarrheal disease with a short period of incubation and in others genuine typhoid fever A critical re examination of the evidence however is needed in most of these cases especially since the bacteriologic data are strikingly incomplete It is sometimes alleged further, in communities in which typhoid fever has been rife as in the cities of Chicago and Philadelphia that cases of apparently non specific diarrhea have been notably more common than in cities supplied with purer water The so called attacks of winter cholera should perhaps be placed in this category

The degree to which infantile diarrhea can be rightly ascribed to the use of infected water must be considered an open question Some facts such as these recorded by [illegible]

2 Hägler Deuts. Arch f Klin Med 1872 11 p 2[illegible]
3 First Ann Rep State Board of Health and Vital Statistics of Pennsylvania 1886
Thomson Ann Rept Med Officer Local Govt Board 1893-4 p 47
5 The Journal A M A March 21 28 Apr 4 1903
6 The Journal A M A Dec 12 1903 Eng News Dec 21 1903 Twentieth Ann Rept of Penn State Board of Health
7 The Journal A M A Dec 20 1902
8 Jour Exp Med 1898 3 p [illegible]
British Med Jour 8
10 [illegible]
8 [illegible] für 1892

color to the supposition that infection sometimes comes by this channel The danger must be recognized as a real one, although the relative frequency of water infection under ordinary conditions of infant nourishment has not yet been definitely ascertained

Both the bacillary and the amebic forms of dysentery are ordinarily water borne infections Although the two infections are etiologically and otherwise distinct, the sources of infection and the modes of transmission are probably very similar In both cases the infectious elements are contained in the feces of the patient or convalescent, and the entrance of the bowel discharges into drinking water must constitute the most important mode of dissemination, precisely as in Asiatic cholera

The somewhat rare affection known as Weil's disease or infectious jaundice has also been definitely traced to the use of polluted water[11] The organism (*B proteus fluorescens*) concerned in the causation of this disease is discharged from the body of the sick in the urine and feces,[12] and the same prophylactic methods, therefore, are necessary as in typhoid fever

Anthrax in animals sometimes has been traced to the use of highly contaminated water, notably in a case reported by Diatroptoff[13] River water may receive anthrax spores through the drainage from tanneries and the like, and when such infected water overflows meadow lands the spores may be deposited and taken up subsequently by grazing cattle No instance appears to have been recorded of water borne infection in man

The opinion has often been expressed, especially by physicians in malarious regions, that water derived from marshy districts is the cause of malaria, but there is no real evidence that this is the case Experimenters who have drunk water taken from swamps in malarial localities have experienced no ill effects, and even the swallowing of small quantities of blood derived from malarial fever patients and known to contain the specific parasite has not produced the disease Furthermore, the demonstrated dependence of malaria on the bite of certain mosquitoes places the hypothesis of malarial water infection in the region of unverified myth

It seems quite unlikely also that water ever serves as the vehicle of infection in yellow fever In this disease as in malaria, the transfer from man to the mosquito and back again to man seems to be the only means of propagation

In the case of the bubonic plague it is very doubtful whether water plays any rôle in the transmission of the disease. The German Plague Commission was unable to discover evidence of any authentic case of alimentary tract infection in man, and, although perhaps the possibility of water infection can not be altogether excluded this mode of conveyance must be so infrequent as to have little practical importance

Infection with various animal parasites may sometimes result from the contamination of drinking water, especially in tropical countries It is stated that the occurrence of the hydatid stage of *Tænia echinococcus* in man is usually due to the swallowing of the ova present in polluted water The tapeworm form of this parasite inhabits the intestine of the dog and human infection is said to be common in countries where dogs abound, as in Australia and Iceland Infection with *Ascaris lumbricoides* is also usually attributed to drinking water The ova of this worm may pass directly from the intestine into sewage, and if such sewage enters a water supply a possible cycle of infection is clear Other parasites, infection with which is attributed with more or less reason to water conveyance are *Bilharzia hematobia Ankylostomum duodenale, Trichocephalus hominis and Filaria mediensis*

CHAPTER II

SOURCES OF INFECTION

The most common way in which water becomes infected is through admixture with sewage The infectious elements or disease germs in sewage sometimes may be derived from street washings or from factory waste but in the great majority of cases they enter the sewage directly together with the discharges from the human bladder or intestine This is notoriously the case with the bacteria of typhoid fever and Asiatic cholera, diseases which are by far the most common as they are the most serious of the water borne infections

In Asiatic cholera, it is well known that the specific germ leaves the human body in the intestinal dicharges in which it is often present in large numbers It has been shown also that the dejecta in mild and apparently simple cases of diarrhea, occurring in times when cholera is prevalent, may contain myriads of cholera spirilla, and that at such periods, moreover, cholera spirilla have even been found in the intestinal contents of perfectly well and healthy persons It follows that such persons, migrating from a cholera infected district, although remaining healthy themselves, may be the means of scattering the seeds of infection Any condition, therefore, chance or otherwise, that allows sewage to mingle with water used for drinking purposes may be the means of originating an outbreak Those communities into whose water supply sewage enters are, hence, in greater or less peril at all times when cholera is rife in the surrounding region

The sources of infection in typhoid fever are similar to those in cholera with the addition that the liability of carriage by mild or unrecognized cases is present in even greater degree. The evidence both from epidemiology and bacteriology indicates that the typhoid bacillus remains in the human body longer after convalescence than does the cholera spirillum This is particularly true as regards its persistence in the urine The investigations of the last few years have shown that in from 25 to 30 per cent of all cases of typhoid fever the urine contains typhoid bacilli They are sometimes found here in enormous numbers, and may range as high as 500,000,000 per cubic centimeter (Horton Smith) Examinations occasionally reveal their presence far into convalescence, and it is possible that in rare instances the urine of the patient may remain infectious for years after complete recovery The broad epidemiologic importance of this fact has only recently become fully recognized. The evacuations of urine are more frequent and copious than the discharges from the bowels, are more highly infectious, and may remain infectious for a longer period On the supposition that the urine of typhoid fever patients and convalescents may contain the specific bacillus, apparently mysterious cases of isolated infection and even obscure epidemic outbreaks become susceptible of plausible explanation At least one instance is on record[14] where a well water apparently became contaminated from urine alone, since typhoid bacilli were found in the water without any admixture with colon bacilli, and this would hardly have been the case had any accompanying fecal contamination occurred The relative facility with which infection may result from the urine of a case of walking typhoid or of a convalescent renders this source of evil a particularly insidious one, and one against which special precautions will doubtless soon be taken more generally both by health authorities and by physicians in private practice The well known fact that urine can be freed at least temporarily from typhoid bacilli by the administration of hexamethylenamine to the patient has been taken general advantage of, but other methods of disinfecting the urine after passage (e g with carbolic acid or mercuric chlorid) should not be neglected, especially in view of the fact that the bacilli may reappear in the urine when the hexamethylenamine is discontinued

Perhaps the most common source of water borne anthrax infection is the entrance into water of anthrax spores discharged in the drainage from tanneries The spores may become detached in the process of cleansing hides imported from anthrax infected localities Infection of well water with spores derived from the bodies of dead or diseased animals may also conceivably occur

In considering the pollution of large bodies of water such as lakes or rivers it has been customary to lay great stress on urban as opposed to rural sources Thus, emphasis is often placed on the urban or sewered population on a watershed to the relative neglect of the dwellers in rural districts There can be no doubt that so far as the amount of organic matter entering a river is concerned, the urban population is vastly

11 Jäger Zeits f Hyg 1892 12 p 525
12 Conradi and Vogt Zeit f Hyg, 1901, 37, p 283
13 Ann Inst., 1893 7, p 286

14 Kübler and Neufeld, Zeitsch. f. Hyg 1899, 31 p 133

more significant than the rural, but the question of infection is on a different footing Many scattered farmhouses are provided with outhouses or privies which adjoin, or perhaps overhang small tributaries of the main stream Disease germs may be introduced from this source, and owing to the relative neglect of disinfection in country districts, this may occur more readily than in urban communities It may be noted that some of the greatest epidemics of typhoid fever have been caused by infection from rural sources, Plymouth, Ithaca and Butler are familiar examples There is evidence, further, that typhoid bacilli introduced into water together with abundant organic matter, as in sewage, perish more quickly than when introduced into relatively pure water From this standpoint also rural infection can hardly be regarded as a negligible quantity

CHAPTER III

INJURY OF WATER SUPPLY BY ALGÆ AND RELATED ORGANISMS

In certain regions and at certain seasons of year the appearance of disagreeable odors and tastes in drinking water is not an infrequent occurrence These odors are particularly likely to develop in reservoir or storage basin waters, the affected waters often becoming so disgusting as to preclude their use on the table It is usually popularly assumed that such odors or tastes are due to the active decomposition of matters of animal origin or even that the nauseous qualities are due to the admixture of sewage with the water The presence of these odors consequently causes serious concern among water drinkers, but such concern, however, is not altogether justified The malodorous or unappetizing emanations, which are quite various in character and are often picturesquely described by terms such as 'fishy" are as a matter of fact due to the products of growth, or sometimes to the products of decomposition of microscopic algæ These products, at any rate in the proportion in which they are found in natural waters are not known to have any prejudicial effect on human life and health The practical seriousness of the trouble, however is shown by the fact that some supplies representing large investments, have been rendered almost valueless by becoming infested with algæ In other cases large expenditures have been found necessary to remedy the evil

The organisms commonly found producing these odors belong to several distinct groups Some of them are diatoms, some of them *Cyanophyceæ* (blue green algæ) and some of them are infusoria Among the diatoms *Asterionella* has been the genus most frequently associated with the occurrence of unpleasant odors When this diatom is present in small numbers the odor has been described as aromatic, resembling the odor and taste of the geranium but when it occurs in very large numbers it imparts a distinctly disagreeable, fishy odor to the water *Asterionella* frequently multiplies in great abundance in pure ground waters which have been stored in reservoirs and which, owing to their nitrate content and their exposure to light and air, afford a highly favorable medium for the development of diatoms In some cities e g Brookline and Newton Mass, it has been found necessary to prevent the growth of this diatom by roofing over the storage reservoir and so excluding the light that is necessary for growth Some other diatoms, such as *Tabellaria* and *Meridion* are found to produce disagreeable odors in public water supplies but *Asterionella* surpasses other organisms of this class both in the frequency of its occurrence and the offensiveness of its products These odors arising from the presence of great numbers of diatoms are due to the products of growth of the living micro organism and not to the products of decomposition It has been well established that these products of growth are due to oily compounds (essential oils) secreted or excreted during the healthy metabolic activity of the organism

Among the blue green algæ (*Cyanophyceæ*) several species have been found implicated in the production of disagreeable odors By far the most troublesome of these is the genus *Anabæna* the natural odor of which is described as "mouldy" or grassy but which when the process of decomposition sets in evolves an extremely offensive stench almost universally described as suggestive of the pigpen This 'pigpen odor is produced by the decay of highly nitrogenous organic compounds, containing sulphur or phosphorus, of such compounds in fact as those which usually produce the evil smells proceeding from the decomposition of organic matter Many hygienically excellent and otherwise highly desirable water supplies have been seriously injured by becoming infested with *Anabæna* Other blue green algæ which produce nearly or quite as offensive an odor are *Clathrocystis*, *Rivularia*, *Coelosphaerium* and *Aphanizomenon*, although they are not found so commonly as *Anabæna* in public water supplies

Among the grass green algæ (*Chlorophyceæ*) the general *Volvox*, *Eudorina* and *Pandorina* have been found associated with the production of more or less pronounced "fishy" odors, which, as in the case of the diatoms, are due to the qualities of the essential oils formed during the normal growth of the organism

In the group of infusoria, *Uroglena* and *Synura* have proved specially objectionable as inhabitants of water supplies A number of important public supplies have been rendered practically unfit for use through the presence of *Uroglena* Middletown and Meriden, Connecticut, and Norwood and Plymouth Massachusetts, are among the places where the organism has caused much trouble The disintegration of the organism during its passage through the water pipes is often responsible for the liberation of the odoriferous materials The water taken from pond or reservoir may swarm with colonies of *Uroglena* and yet emit no disagreeable odor, while the tap water drawn from supply pipes may be highly offensive The odor produced by this organism is hence not really one of decomposition although of an intensely offensive character Other odors of growth have suggested to various observers the odors of ripe cucumbers, rockweed, Irish moss, salt marsh, and even in the case of infusorium (*Cryptomonas*) candied violets!

There is no reason for supposing that the odors and tastes due to the presence of large numbers of any of these microscopic organisms are in any degree dangerous to health this is doubtless true whether the odor be caused by the products of growth or by those of decomposition The proportion in which these substances occur in the natural waters in question is so small as to preclude any physiologic effect In the actual operation of water works, however, the impairment of the esthetic value of water by these micro organisms has often led to considerable expense, and has sometimes placed practically insuperable obstacles in the way of securing a supply that is both palatable and hygienically suitable

Another micro organism that is related only rather remotely to the algæ and infusoria just under consideration but which has frequently caused much inconvenience in the conduct of water works is the so called iron fungus or *Crenothrix* This organism is one of the largest of the higher bacteria and among other peculiarities, is characterized especially by the deposits of oxid of iron in the sheaths of the filament The growth of this organism on the sides of the pipes and conduits of various public water works in widely separated localities has caused much annoyance The rapid multiplication of this plant may suffice to cover entirely the walls of a reservoir or drain pipe with a thick felt, portions of which are dislodged at frequent intervals and swept along by the current as small, dark brown flocculent masses As these appear in the tap water they are extremely unsightly Decomposition of these particles may occur and produce offensive odor Small pipes may become entirely clogged by the growth The famous 'water calamity' of Berlin in 1878 was the first occasion on which the production of trouble was definitely laid at the door of this organism Other municipal supplies have since been attacked by *Crenothrix* notably that of the city of Rotterdam Holland where the *Crenothrix* invasion was thoroughly investigated by the distinguished botanist De Vries At Rotterdam the operation of a well conducted sand filtration plant has been grievously interfered with by the growth of this organism which indeed is said still to cause trouble in spite of all efforts at its eradication The cities of Lille France Rome Italy and some places in this country [illegible] Mass and Fairport Ill [illegible] from [illegible] ment of *Crenothrix* in

Clinical Notes

THE PREVALENCE AMONG SCHOOL CHILDREN OF DISEASES OF THE EAR AND THROAT *

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A review of the following tabulated results of an ear and throat examination made in one of our largest preparatory schools brings to light some points of practical interest. The examination was systematically carried out, and, as gross defects alone were looked for and recorded, the tables show only such conditions as were undoubtedly harmful to the boys from the standpoint both of physical health and scholastic efficiency. The figures underestimate rather than exaggerate the amount of disease present. It may, perhaps, be said that the number of boys examined is too small to be of great statistical value, nevertheless the figures do give some idea of the relative prevalence of diseases of the ear and throat among school boys of the better class in whom it ought hardly be expected to find any harmful disease that prophylaxis can prevent or medical science cure.

TABLE SHOWING RESULTS OF AN EXAMINATION OF SCHOOL CHILDREN OF THE BETTER CLASS

	39 examined 8 to 10 years of age, per cent.	91 examined 11 to 13 years of age, per cent.	117 examined 14 to 16 years of age, per cent.	50 examined 7 to 19 years of age, per cent.	297 total examined, per cent.
EARS					
Normal	64.10	57.14	53.84	52.00	55.87
Deafness slight, in one or both ears	10.25	20.87	27.34	26.00	22.88
In both ears	2.56	10.98	6.83	12.00	8.41
Deafness marked in one or both ears	7.68	6.58	10.25	6.00	9.09
In both ears	2.56	2.19	0.00	6.00	2.02
History of purulent discharge	15.38	14.28	8.54	4.00	10.43
Impacted ear wax	10.25	5.49	2.56	2.00	4.37
NOSE AND THROAT					
Enlarged tonsils including adenoids	28.20	18.12	10.25	8.00	14.98
History of removal of tonsils	8.97	1.09	2.98	1.00	2.85
Abrasion septum (nose bleed)	0.00	3.29	2.56	2.00	2.35
Chronic catarrh of nose	17.97	2.19	4.27	0.00	4.75
Obstructive lesions of nose	3.84	8.23	5.55	1.00	3.87
Hay fever	0.00	0.00	0.00	8.00	1.34
Chronic pharyngitis	5.12	9.89	11.96	6.00	9.42

Looking over the table in detail we find only 55.87 per cent. of these boys had approximately normal ears. The older boys were freer from ear disease than the younger ones, the explanation of which is found in the lower table, which shows a lessening of nose and throat affections as the boys outgrew childhood diseases and tonsillar enlargements—the most frequent causes of ear troubles.

Noticeable deafness for the voice, in one or both ears, occurred in an average of 9.09 per cent. of the boys, a high percentage in view of the handicap such deafness places on a student in his mental development. Impairment of hearing in one or both ears that was readily detected by simple tests was found in 22.88 per cent. of the boys. Impairment of hearing increases progressively up to the fourteenth and sixteenth year, after which it decreases somewhat. This decrease can be explained by the reasons already given above, namely, that they have passed the age when diseases of childhood and tonsillar hypertrophy are prevalent. A sufficient percentage of deafness continues into the older years to prove that an "outgrowing" of deafness can not always be counted on.

The percentage of children giving a history of purulent discharge from the ear also becomes smaller as they grow older. It may safely be assumed that the older boys are freer from purulent middle ear disease. For althought a larger percentage was affected when they were younger, later on they had forgotten about it, while the younger boys remembered the ear discharge because of its comparatively more recent occurrence. Hearing is not often seriously affected by purulent discharge from the ear, the chief danger lying in the possible extension of the purulent process to the brain.

The filling of one or both ears with ear wax was noted in 4.37 per cent. The percentage of pupils affected was larger in the young and became less as they grew older.

Cases of enlarged faucial and pharyngeal tonsils, the chief causes of mouth breathing and deafness in children, decreases at puberty, but disappearance of the tonsils does not invariably take place. The number of boys giving a history of removal of the tonsils lessens as they grow older, firstly, because many have forgotten about the operation performed in the past, and, secondly, because operation for adenoids and tonsils was not so frequently resorted to formerly as at present.

Examination of the nasal fossae of boys between seventeen and nineteen was not as carefully made as in the other children, a thorough examination entailing too much time and trouble, otherwise it is probable that a higher percentage of defect would be recorded under chronic catarrh of the nose and nasal obstructive lesions in the columns for those ages.

Four out of fifty boys between the ages of seventeen and nineteen gave a history of "hay fever." Perhaps other boys suffered from this affection, but had not yet recognized it in its incipiency.

In concluding we are justified in stating that a surprisingly large number of school children suffer from defective ears and throat, and that, therefore, all school children should be subjected to a thorough examination at least once a year. Many of these children are incapable of gleaning the full benefit of their school training because they are retarded in their progress on account of these defects and consequently require a greater amount of attention from their teachers, which is given at the expense of the other boys.

Therefore, it seems that it would be highly beneficial from a standpoint of prophylaxis to require a certificate of examination on a child's admission to the first primary grade, for that is the time when most good can be done in a prophylactic way by removing obstructive adenoids and hypertrophied tonsils. The examination should be made by a capable physician or medical inspector, with itemized reference to nose, throat and ear as well as the rest of the body. If defects were found, although the examiner might not be able to refuse the child admission to the school in case the parents refused the necessary means of correction, he could at least strongly advise treatment and send in with the child a certificate calling attention to each child's individual defect. These children could then be separated from the others for careful observation and frequent examination. If the child, receiving no attention at home, develops a severe attack of earache the teacher could explain to the parents the cause of the condition and perhaps gain their consent to the removal of the offending adenoids and tonsils. In this way the chances of serious middle

*Read before the Philadelphia County Medical Society, March 12, 1907.

ear disease with its many complications and sequelæ will be lessened and something will have been done toward lowering the very high percentages recorded in our tables

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AMYOTROPHIC LATERAL SCLEROSIS

CLINICAL REPORT OF A CASE.

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If for no other reason, I would appear to be justified in reporting a case of this extremely rare nervous disease, when the statement is made that this case was diagnosed as locomotor ataxia by as many as five physicians, some of whom reside in various parts of the United States

Patient—J K, white, married, aged 50, traveling salesman for Ferris wheels and merry go-rounds, was examined Jan 19 and 20, 1905 He has two children in good health, and has lost none In the past ten years he has made seven trips to the tropics (Porto Rico, Cuba, Philippines, etc.), averaging about seven to eight months in each year in a tropical climate

Family History—Negative Mother living, aged 87 Father died of chronic bronchitis at 69 One grandparent died from an accident, one died at 85, one at 82 and one at 65 No history of tuberculosis or nervous diseases in the family

Personal History—At the age of 15 he had a severe attack of pneumonia, and at 20 was critically ill with typhoid fever Denies syphilis, no evidence of any specific infection From the age of 20 to 40 he had not been confined to bed on account of illness Injuries In 1887, while lifting a very heavy log the bolt in the cant hook broke and his body was suddenly elevated, causing severe pain in the small of the back, which has continued to some extent up to the time of this examination—a period of eighteen years Patient remarked that since this accident he noticed that "in lifting any moderately heavy weight, the muscles on the right side of the spine" (in lower dorsal and lumbar regions) "would swell up and get very firm, and the small of the back would feel sore for three or four days" He sometimes lived at a "pretty swift pace," drinking heavily at other times drank nothing for weeks Sexual habits usually moderate

Present Illness—In the early part of October, 1903 (at the age of 49), patient first noticed a little twitching of parts of the muscles of the right leg from hip to knee, and about three weeks later fibrillary twitchings of muscles of the left arm appeared Three or four months after this came the fibrillary twitchings of the muscles of the left leg from hip to knee, and several weeks later the twitchings appeared in the muscles on either side of the spine and in the intercostals A short time after the twitchings began, patient noticed more or less weakness of the muscles affected, and in the case of the arms, intercostals and muscles of the back, atrophy began to appear With weakness of the intercostals, he noticed that his "lungs would not fill up as readily as formerly" He says that up to date of examination there has been very little twitching of the muscles of the legs below the knees and careful examination failed to elicit any fibrillary movements of the calf muscles

Patient's Condition Jan 20, 1905—A man of large frame, who had weighed a year or more previously 235 pounds, now shows at a glance some atrophy of the intercostals and of muscles of the back, neck, shoulders, upper arms and forearms, with wrist drop on each side, the left being more marked than the right There is also some shrinkage of the muscles of the buttocks and hips, and an apparent hypertrophy of the muscles of the thighs and legs, the contrast between the atrophy of the muscles of the arms forearms and hands and the normal or slightly hypertrophied condition of the muscles of the thighs and legs being quite marked There is a peculiar hoarseness of the voice and some fibrillary tremor of the tongue He is unable to whistle Fibrillary twitchings of the muscles of the arms, neck and thighs are noticeable at times Spasticity of the legs is prominent He is able to walk with assistance, the gait being markedly spastic

Physical Examination—This shows the heart normal Some shortness of breath is present. Pulse 78, temperature 99 Bladder and bowel functions normal, sphincters all intact, and sensory conditions normal Electric reactions The left arm shows slight reaction to faradism in the deltoid, biceps and triceps, no response in extensors, but some in flexors of forearm little or no response to galvanism, except a tetanic contraction in the deltoid Right leg All thigh muscles appear to respond to faradism, the thigh muscles showed marked A C C to galvanism The calf and other muscles of the right leg below the knee show some response to faradism Left leg Practically the same electric reactions as those of the right, but response is somewhat weaker Eyes Pupils, vision, fields of vision, and muscular movements normal Ears No deformities Hearing normal in both ears, senses of smell and taste normal, memory good, logical powers good Emotions Extremely emotional at times, laughing and crying Very anxious to get well, but if he must die, insists that he can not and must not be allowed to suffer Sleep Awakens about every two hours when he becomes restless and irritable, desiring to be removed from bed to a chair and back again in a short time Reflexes Jaw jerk exaggerated Elbow jerk exaggerated Knee jerks very markedly exaggerated Ankle clonus present on left side, not elicitable on right side because of former injury to right ankle joint (fixed joint) Babinski present in both feet. Wrist jerks absent, owing to extreme atrophy of extensor muscles of the forearms Cremasteric present Abdominal present

As time advanced the condition grew progressively worse The trapezius and other muscles of the neck grew weaker and weaker until he was unable to hold his head erect, a special pillow being arranged to support the head The voice became so feeble that it was scarcely audible. Fibrillary tremors were often noticeable without tapping the muscles involved Swallowing and respiration became extremely difficult Finally pulmonary edema developed, causing death on July 21, 1905 the actual duration of the disease being twenty-two months An autopsy was urgently requested but was declined

This would appear to be a typical case of amyotrophic lateral sclerosis This disease is defined by Starr as a chronic form of spinal paralysis characterized by the symptoms of progressive muscular atrophy in the arms and of lateral sclerosis or spastic paraplegia in the legs Oppenheim states that in typical cases bulbar paralysis occurs All of these symptoms were present in this case

ETIOLOGY

Little is known of the causation of this disease In this case we have perhaps two possible factors in the etiology, namely, prolonged exposure to heat in the tropics and the sudden wrenching of the spinal muscles eighteen years previous to the first symptoms Examination of the spine failed to show any curvature or other injury and I am led to the conclusion that this very remote accident was probably not the exciting cause of this condition Whether prolonged exposure to tropical heat was a predominating factor in the etiology of this case, I am at present unable to determine

AGE OF ONSET

This case began at the age of 49 years which is not an unusual age of onset. Collins, who has made an interesting study of nearly all the cases of record found that of 100 unselected cases 29 occurred between 15 and 50 30 between 30 and 40 28 between 50 and 60 and only 2 under 30 McPhedran's case began at 47 Gor-

don reports a case in a boy of 15 with a history of acute anterior poliomyelitis in infancy

DURATION OF THE DISEASE

My case lasted 22 months, which is probably about the average length of this disease. Collins reaches the conclusion that the average duration is about two years. A few of the recorded cases lasted from six to nine months. A very small number lasted four to five years, while one case extended over a period of ten years. McPhedran believes most cases terminate in one year, but the case reported by him lasted two years.

A NEW METHOD OF OPERATING FOR ANORECTAL FISTULA.

PRESERVING THE CONTOUR OF THE ANUS AND THE FUNCTIONS OF THE SPHINCTER MUSCLES

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I have learned from practical experience that much can be done to preserve the functions of the anal sphincters by operating as follows: The patient having

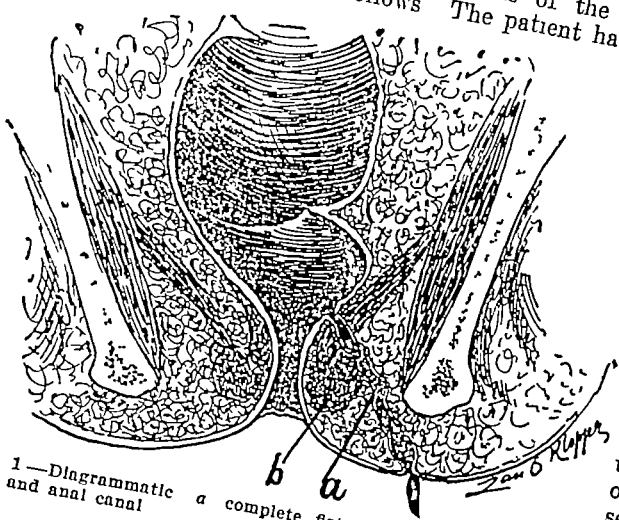

Fig. 1.—Diagrammatic. a, complete fistula; b, tissues between fistula and anal canal.

been prepared in the usual manner, the fistula (Fig. 1) is injected, when deemed necessary, with a solution of methylene blue (methylthionin hydrochlorid, U. S. P.) or other coloring materials to aid in searching out the course of the tract or tracts. All of the fistulous tracts external to the sphincter are then divided. A probe-pointed director is then passed into the bowel through the remaining tract and an incision is made on its distal side. This incision should extend far enough distally to divide all or a part of the fibers of the external sphincter and in such a direction as to locate the transferred internal opening at or near the anal margin (Figs. 2 and 3). Then, turning the knife, make an incision—Salmon's "back cut"—on the proximal side of the tract. A seton is then passed through the opening entering the bowel and tied loosely around the tissues remaining and undivided (Figs. 2 and 3).

The wound is dressed as after the ordinary incision operation for fistula. At the end of twenty-four to thirty-six hours the wound is redressed, care being taken to dress it so that the opening entering the bowel will be made to heal from the proximal toward the distal side. The object in doing this is to advance the final fistulous tract as far distally (toward the skin) as the case will permit, so that, if possible, it will pass through or distally to the fibers of the external sphincter, when the healing process is complete.

As a rule the enlarged tract entering the bowel soon closes, with the exception of that part through which the seton passes. As soon as this has occurred the seton may be removed, and by the time the external wound is healed the tract entering the bowel will possibly have closed also. Should it not, at any time later this little tract, which will usually not be more than 1 inch in

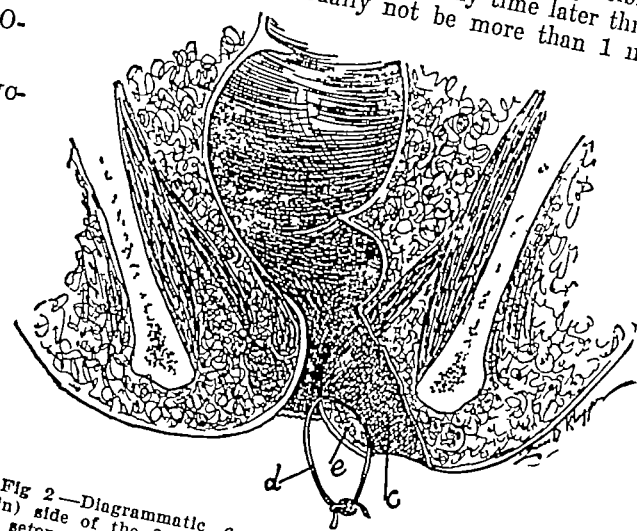

Fig. 2.—Diagrammatic. c, scope of incision on distal (toward the skin) side of the fistula; e, tissues remaining and undivided; d, the seton passed around them and tied.

length, may be dissected out and the remaining fibers of the muscle sewed together, thus preserving the contour of the anus and the functions of the sphincters.

By operating in this manner no deep sulcus is left to mutilate the anus as there frequently is following the usual incision method of dividing the muscle. Instead of this the contour of the anus is preserved. Should the seton be left *in situ* until the wound is completely healed a small non-secreting fistula will be seen entering the

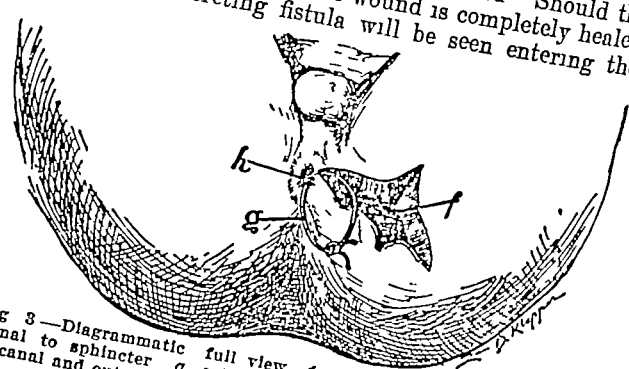

Fig. 3.—Diagrammatic. full view; f, incision of fistulous tracts external to sphincter; g, seton passed through the opening into anal canal and out through anus h.

anal canal. This may be left alone or dissected out and sewed together at will. Sometimes this opening will give no annoyance and finally close without further interference.

Should the remaining tissues in this case be simply divided without dissecting out the tract and sewing them together, mutilation of the contour of the anus and loss of control to a certain extent would most likely follow. In such a case the entire epidermis-lined tract should

be dissected out and the ends of the muscle united This may be done either under local or general anesthesia It is best performed, however, under the latter

The question might arise What is the use of the seton? Would it not be just as well, or even better, not to use it? No, for by using it the opening into the bowel is transformed and transferred at the pleasure of the operator and the incision through its use made to heal from the proximal toward the distal side, or, in other words, with it you can direct and greatly control the healing process and the location of the final fistulous tract

It might be objected theoretically that there would be constant reinfection from the setonized fistulous tract which would be inimical to the healing Practical experience has not found this to be true Besides, the tract is washed out daily with an antiseptic solution

It is the consensus of opinion that the large majority of cases of incontinence following operations for fistula could be avoided if the external sphincter were cut squarely across and the ends sutured together or the postoperative treatment so directed that the ends of the muscle would be slightly separated by the cicatrix The seton method provides for this procedure

The anus not being divided aids the healing of the external wound and prevents much of the contraction and atrophy usually observed after these operations

By operating in this manner we simply have an external wound with which to contend The anus is not disturbed to any great extent, and in some cases not at all, and the patient is usually up and around in a few days Moreover, the bowel movements do not soil the wound

Finally, I have found that the employment of this method of operating greatly aids in preserving the contour of the anus and the functions of the sphincter muscles in operating on many cases of anorectal fistula

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THE BICYCLE PUMP IN INTUSSUSCEPTION

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History—Baby X, aged 13 months, was reported by his mother on the afternoon of Nov 10, 1907, as having vomited several times during the day and being unable to retain anything in his stomach I directed her, by telephone, to give the child calomel gr 1/10 every twenty minutes At 7 p m the mother asked me to see the child, as he was no better No other than his usual food had been given him, and this had previously agreed with him, as evidenced by his weight, 32½ pounds He had had one small bowel movement in the morning, prior to this his bowels had been regular

Examination—I could detect nothing to account for his symptoms His temperature was normal, there was no tenderness over the abdomen, and but for the frequent vomiting his condition seemed good Between the attacks of vomiting he was bright, though peevish, and wanted to be carried, which for him was unusual I directed that the calomel be continued On the following morning his temperature was 101 6 F, the vomiting had continued and his bowels had not moved There was still no abdominal tenderness

Treatment—Calomel gr ¼ was ordered every two hours until four doses had been given As this produced no effect, the same dose was given every hour until one more grain had been taken At 3 a m the child had one very small bowel movement. On the morning of November 12 there was no further movement. The temperature was 99 6 F Saline enemas, one pint with the addition of an ounce of glycerin were ordered every three hours At 11 p m. Mrs X. called me up and asked me to come to the house, as the baby's bowels had not moved, and she was worried about him When I arrived he still seemed in good condition, but kept his mouth open in a peculiar way, as though he was nauseated, and every few seconds yawned It was this open mouth and yawning that worried the family The enemas having produced no result, I had, at 7 p m, ordered the addition of ox gall to every enema The abdomen being very soft and free from tenderness, I performed massage, and directed that the enemas be continued, but in larger quantities

By the morning of November 13 there was still no movement. Child retained albumin water, but was given only a teaspoonful at a time. Vomited occasionally A mass, which the mother could also plainly feel, was made out in the right iliac fossa, a little below the appendix. Only slightly tender, but pressure produced gurgling I advised consultation, and Dr L E La Fetra was asked to come over He arranged to be at the house at 4 p m. At 1 o'clock I again saw the child The mass, if anything, was larger, and was now very tender, the slightest touch causing the child to cry Feeling now certain, of what for the past twenty four hours I had suspected, that I had a case of intussusception to deal with, I took a bellows, attached to it a catheter, and introducing the latter into the rectum, attempted to inflate the intestines sufficiently to replace the telescoped gut. The bellows worked badly, and my efforts were unsuccessful One of the boys in the family having a bicycle pump, I substituted this for the bellows I had the father manipulate the pump slowly and carefully, while I kept up percussion over the abdomen. When I considered that sufficient air had been introduced, I withdrew the catheter, and directed Mrs X. to wait a half hour and then give an enema When I returned at 4 o'clock to meet Dr La Fetra, Mrs X. informed me that just after the enema the child had had a small fecal movement, and an hour after another Dr La Fetra examined the child, but finding no mass asked me to point it out. I attempted to do so, when I was surprised to find that it had entirely disappeared There was no possible doubt that it was there before the pump was used, as not only I, but the mother, distinctly felt it, and I not only felt it, but distinctly mapped it out. Between 1 and 4 o'clock there had been a wonderful improvement in the child There was but one conclusion to reach, and in this Dr La Fetra said he thoroughly concurred, that it was a case of commencing intussusception, and the air driven in by the pump had forced the invaginated gut back to its normal position That night the child had a large bowel movement, and from then on continued steadily to improve There was no return of the trouble, and he has since been perfectly well

54 Richmond Road

A CASE OF VOLKMANN'S PARALYSIS AND CONTRACTURE

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In view of the recent publication of an article[1] on Volkmann's paralysis and contracture, giving a history of the literature of the subject and a tabulation of cases, it was thought that the following case, which through the kindness of Dr E H Arnold, I am permitted to report, might prove of interest

Patient—A L, girl, aged 5½, was brought to Dr Arnold March 1, 1901, with the left hand and wrist paralyzed and contracted

History—Family history and personal history up to time of accident five months previous were negative On Nov 10 1900, patient fractured left humerus just above elbow joint The fracture was reduced and the arm splinted and bandaged It was not especially painful, but the hand soon puffed up, assumed a wax like pallor and the fingers began to contract The attending physician brought another in consultation and

1 Powers (Charles A) Ischaemic Paralysis and Contracture of Volkmann THE JOURNAL A. M A., March 2 1907 p 7[illegible]

the bandages were loosened, but not removed for some time The exact time of removal of splints was not remembered by the mother, but the attending physician told her it was sooner than usual At this time sloughing was found to have taken place on the anterior aspect of the forearm The wrist and fingers were flexed and absolutely powerless

Examination—March 1, 1901, five months after the accident, the conditions were as follows On the anterior aspect of the left forearm, slightly to the radial side and about two inches below the bend of the elbow, was a scar an inch in diameter The flexor muscles were short, hard and adherent, the lower part atrophied, changing the contour of the arm The fingers were flexed on the hand and the hand on the forearm There was little power of voluntary movement and even passive extension was impossible.

Diagnosis—Ischemic contracture

Treatment—Previous to this examination there had been some treatment by forcible stretching, but without effect on the contracture Heat and massage, electricity and passive movements were now advised by Dr Arnold and after some delay these measures were instituted Good effect was soon apparent in lessening of the contracture and improved usefulness of the hand, but owing to temporary removal of the patient to another town there have been long intervals in the treatment Since January, 1907, treatment has been pushed vigorously, and, although six years have elapsed since the injury to the muscle, improvement is noticeable The treatment now consists of dry hot air, followed by cupping over the scar, effleurage, frictions, pétrissage and vibrations of the muscles, passive stretching and active movements with special apparatus The muscle bellies are becoming softer and less board like, the lower forearm is rounding out, and the power of extension is increasing It is still impossible to extend simultaneously wrist and fingers, but the wrist can be extended with fingers only moderately flexed at the terminal joint, and the hand is nearly, if not quite, as useful as its mate. This case is clearly one of Volkmann's paralysis and contracture, i e, ischemic paralysis due to the pressure of too tight dressings

In view of the great improvement already noted it would seem that an early institution and vigorous prosecution of appropriate non-operative treatment might have cured the deformity as well as restoring the functional ability Indeed, even at this late day there is some hope of such a result Of the cases tabulated by Powers 31 had non-operative treatment Of these 4 are described as completely recovered, 1 as almost recovered, 6 as having good functional results with deformity, 12 as manifesting slight improvement and 8 as being unaffected by treatment The case herewith reported falls at present in the third class of good functional results with some deformity The latter has, however, been so much reduced that it may yet present complete recovery

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A NEW URETHROSCOPE TO BE USED WITH THE AID OF WATER DISTENSION

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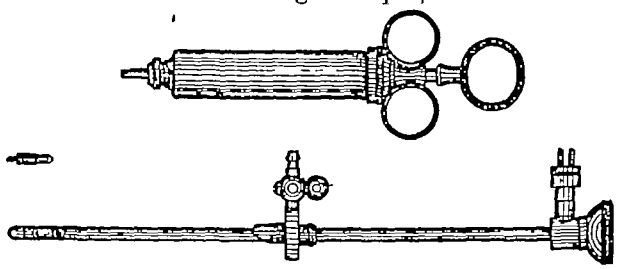
The accompanying cut represents a urethroscope based on the broad principles of the cystoscope, but so modified as to enable one to get a lateral view of the urethra and not that of the collapsed wall which we ordinarily see At first I employed the ordinary tubes in which a window had been cut immediately opposite the prism, but this proving unsatisfactory, it occurred to me to distend the urethra with water and to discard the tube entirely I then devised the metal cap to be fitted into the meatus Water distension has proved to be very advantageous and superior in many ways to the tube

DESCRIPTION OF INSTRUMENT [1]

The urethroscope is No 15 French, its full length is 20 cm (8 in), its length from the outer lens to the prism is 17 5 cm (7 in), it focuses at 1/8 inch, at which distance the amplification is 3 diameters The prism is made after the modern double convex pattern The lamp is turned around so as to be placed very near the prism, but separated from it in such a way that the setting of the prism does not get too hot. The connection with the cord is made by means of two metal rods, the adjustment at this point being such that a slight turn makes or breaks the connection The instrument passes through a metal cap which is made so as to fit into the meatus, this piece has a second opening, which is provided with a cock into which a syringe fits and which can be opened or closed by means of the point of the syringe The syringe is made of metal and holds 6 drams

MODE OF USING

The instrument is inserted into the urethra and the middle cap slipped down and fitted into the meatus The glans is then pulled up so as to make the meatus watertight. The syringe having been filled with water, the point is adjusted into the cap and the urethra is distended The amount of water to be injected is regulated by the degree of distension as felt by the finger on the outside of the urethra, as a rule 3 or 4 drams are required The connection is now made and the lamp illuminated In order to get the proper focus the lower



end of the urethroscope is pressed against the wall of the urethra opposite to the point which is to be inspected The metal cap is held together with the glans in the left hand and the telescope pulled up and down and rotated so that the whole urethra is passed under inspection No pain is experienced, no cocain is necessary and all adult meatuses will admit the instrument easily

This urethroscope can be used without the metal cap, in which case the urethra is distended with water and the meatus held closed by the fingers, after having been well lubricated with glycerin and a drop of glycerin having been poured on the meatus, the instrument can be slipped in without the escape of any water

In view of the clear delineation of the blood vessels of the urethral wall and of the glands and follicles I believe that after one is accustomed to it and is able to interpret the pictures it will be found far superior to the urethroscope now in use

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1 When I presented my idea for the construction of a urethroscope to Mr R. Wappler of New York I found that he had a small straight cystoscope similar to the one above described I can not therefore claim originality in the cystoscopic part of my instrument. I wish to thank him for his valuable assistance

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Tuberculosis of the Uterus—Reginald H Lucy, Plymouth, England asserts that tuberculosis of the uterus is more common than is suspected He believes that as microscopic evidence accumulates it will be found that many ulcerations of the cervix, hitherto considered malignant, will prove to be tuberculous—*Jour Obst and Gyn of Brit Emp*

A NEW GRAPHIC URINE CHART

FOR THE URINE FINDINGS IN DIABETES MELLITUS

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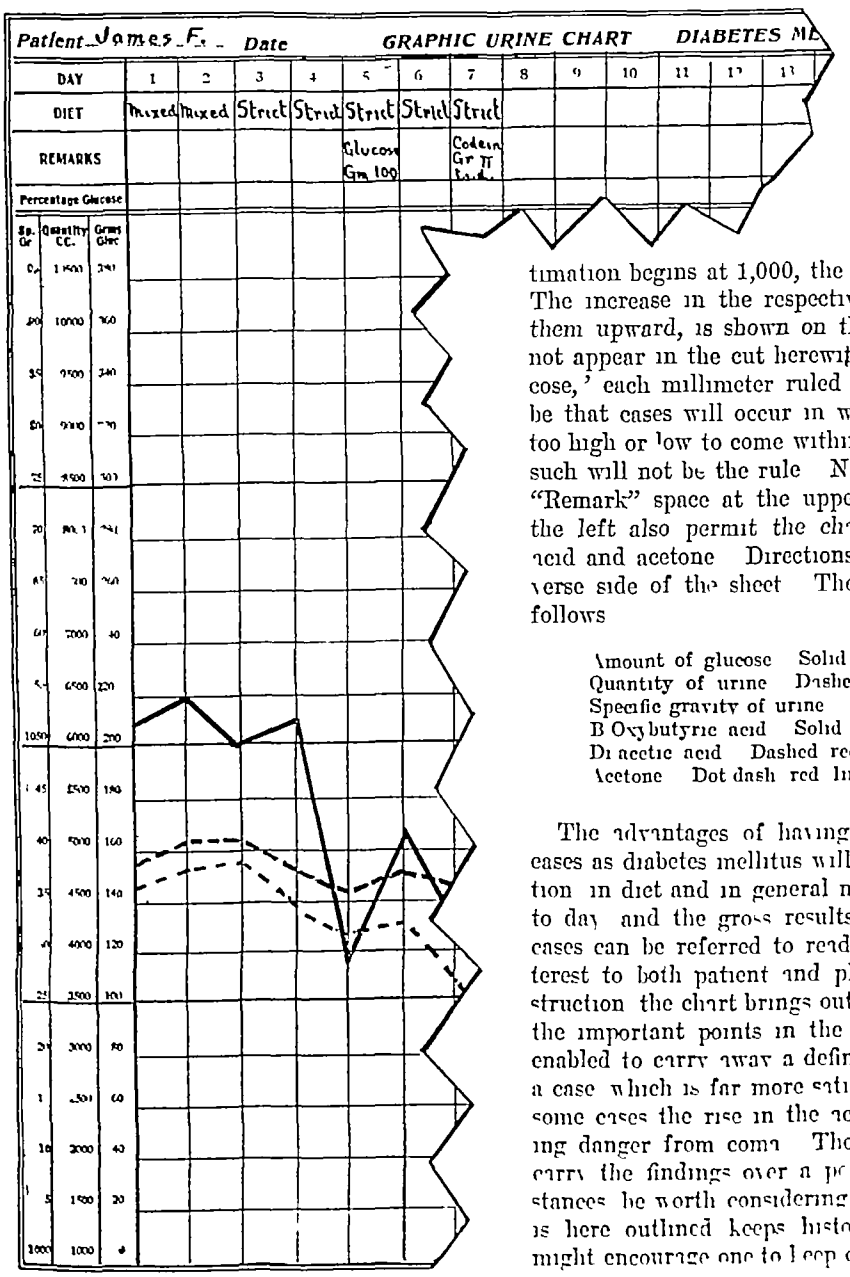
The chart here reproduced was designed (1) to facilitate the keeping of a concise record of the urine findings in diabetes mellitus, (2) to show the effects of treatment, by diet and medication, on the amount and character of the urine, (3) to show by curves the relation of the various urine findings to each other, and (4) to enable students to better appreciate the progress of the disease in respect to the urine and to perceive the modifying factors more readily

The chart has been made as simple as possible for the number of facts it embraces A glance will show the general arrangement It is printed on millimeter ruled paper The sheets are of convenient size for filing in patients' histories Appropriate headings permit the sheets to follow the course of the disease in a given patient over an extended period

Roughly, the chart may be divided into two parts (a) An upper section for clinical observations and (b) a lower part for the purely laboratory work, the results in this part being expressed by curves

(a) Arrangement is made to tabulate changes occurring over a period of four weeks, as expressed by the numbers heading the vertical columns, the words "Diet" and "Remarks," respectively, begin horizontal columns, in which variations in food, the administration of glucose for test purposes, or medication given, may be noted each day, and the effects watched, a fourth series of daily spaces permits the entering of the daily percentage of glucose eliminated

(b) For convenience in reading and in entering findings, this space is divided by horizontal lines into four smaller sections Vertically the day columns are continued To the left are columns headed respectively "Specific Gravity" "Quantity" (of urine passed in twenty-four hours) in c c "Grams Glucose" and below the headings are the figures applying thereto They read from below upward It will be seen that the specific gravity estimation begins at 1,000, the quantity of urine passed, at 1 000 c c The increase in the respective columns of figures, as one follows them upward, is shown on the chart by fine blue lines, which do not appear in the cut herewith For instance, under "Grams Glucose," each millimeter ruled in blue represents 4 grams It may be that cases will occur in which the quantitative estimations are too high or low to come within the limits allowed on this chart, but such will not be the rule Note may be made on such days in the "Remark" space at the upper part of the chart The figures at the left also permit the charting of B-oxybutyric acid, diacetic acid and acetone Directions for charting are printed on the reverse side of the sheet The different findings are designated as follows



Amount of glucose Solid black line ————————
Quantity of urine Dashed black line — — — — — — — —
Specific gravity of urine Dot dash black line — — — — — —
B Oxybutyric acid Solid red line ————————
Di acetic acid Dashed red line — — — — — — — — —
Acetone Dot dash red line — — — — — — — — — — — —

The advantages of having charted urine findings in such diseases as diabetes mellitus will readily be seen Changes in medication in diet and in general management can be watched from day to day and the gross results over a long period compared The cases can be referred to readily and frequently facts of great interest to both patient and physician noted For purposes of instruction the chart brings out more forcibly than any other method the important points in the course of the disease Students are enabled to carry away a definite mental picture of the progress of a case which is far more satisfactory than an array of figures In some cases the rise in the acid curves might foretell the impending danger from coma The economic value of having one sheet carry the findings over a period of four weeks may in some instances be worth considering In private practice such a chart as is here outlined keeps histories from becoming bulky—in fact might encourage one to keep closer watch of the [illegible]

TONSIL SNARE

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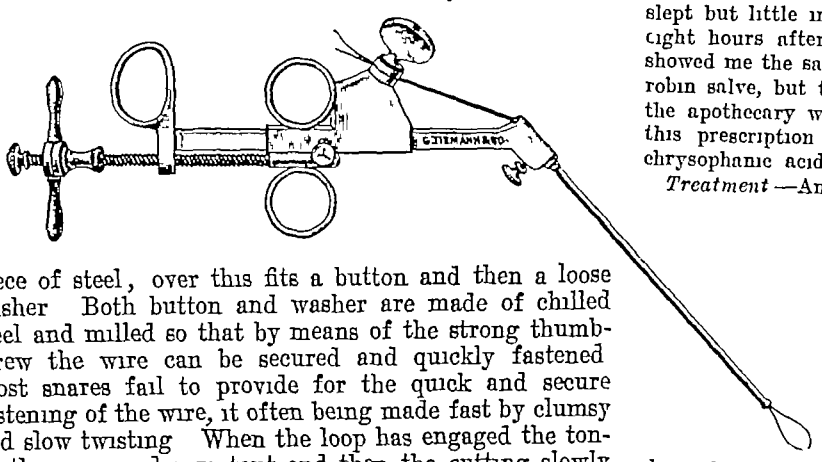
The use of the snare with a cold steel wire for the removal of the tonsil requires an instrument simple in construction and strong in all parts The instrument here shown covers, I think, these requisites

No provision is made for the re-use of the same wire because the snare can be so quickly threaded and a loop once used loses its best form The general shape and mechanism is that of snares that are well known to be satisfactory The parts have been adapted to the uses to which it is to be put The canula is strong and has a button on the end to prevent its splitting The screw for the attachment of the wire is set firmly into a strong



piece of steel, over this fits a button and then a loose washer Both button and washer are made of chilled steel and milled so that by means of the strong thumb-screw the wire can be secured and quickly fastened Most snares fail to provide for the quick and secure fastening of the wire, it often being made fast by clumsy and slow twisting When the loop has engaged the tonsil the wire is drawn taut and then the cutting slowly accomplished by the windlass This crushes the vessels and makes bleeding less to be feared

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CHRYSOPHANIC ACID KERATO-CONJUNCTIVITIS

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The fact that chrysophanic acid or chrysarobin, when applied in the form of a salve to any part of the face and even to other parts of the body, will give rise in some individuals to a conjunctivitis of greater or less severity is known to dermatologists and is mentioned in many text-books on diseases of the skin Recently this drug seems to have come into favor again, at least I have been told by apothecaries that it is prescribed more frequently now than for several years past, and this is one reason which has induced me to put the following case on record

Patient—N C L., aged 63, in good health, of temperate habits, a clerk by occupation, came to me on May 5, 1906

Examination—He was led into my office with a bandage over his eyes, and his companion told me that he was blind I found that the eyelids of both eyes were red, shining and edematous The edges of the lids were glued together by secretions After soaking the lashes with warm water, the lids were opened and tears streamed from the conjunctival sac. There was not much secretion in the conjunctival sac. The palpebral conjunctiva was very red and swollen, the bulbar conjunctiva was edematous and intensely injected The corneæ of both eyes were hazy, but the epithelial layer was apparently intact. The pupil was small, but there was no iritis and no disease of the posterior half of the eye. Both eyes were in about the same condition The patient was complaining bitterly of pain and intense burning in his eyes and of photophobia He was unable to keep his eyes open long enough to determine the refraction of the eyes and the amount of vision

History—This is the first time in his life that his eyes have been inflamed For some years the tip of his nose has been somewhat red from enlargement of the blood vessels in the skin, and this has annoyed him a good deal, especially as he never indulges in alcoholic drinks He was told that this condition could be removed, and thereon he consulted his family physician, a homeopath, who prescribed a salve which was to be applied to the skin of the nose every night and washed away again the following morning He applied this salve only once, and on the following morning tried to wash it off, and in doing so he probably got some of it in his eyes His eyes, which previous to this time had been in normal condition, began to give him pain soon afterward, and the lids began to swell in the afternoon of the same day The pain and the swelling of the lids increased very much during the following night He slept but little in consequence of the pain I saw him forty eight hours after he had rubbed the salve in his eyes He showed me the salve he had been using It looked like chrysarobin salve, but to make sure of its composition I applied to the apothecary who had compounded the salve for a copy of this prescription It showed the salve to be composed of chrysophanic acid ʒii and lard ʒvi

Treatment—An examination of the secretion from the conjunctiva showed it to contain a few pneumococci I advised the patient to apply cold compresses to his lids, a salve of ammoniated mercury to the edges of the lids, and to put a drop of a 0 5 per cent solution of sulphate of atropin and 1 per cent cocain in each eye six times daily The cold application failed to give relief, and I substituted for them compresses wet with a warm solution of boracic acid During the next two days his condition remained unchanged I brushed the excoriated edges of the lids with a 1 per cent solution of nitrate of silver once daily On the third day the epithelium of the cornea was wanting in a number of places, mostly in the horizontal meridian, and in the right eye somewhat more than in the left, and the whole cornea appeared somewhat more hazy The lids were now less swollen and much paler than previously On the fifth day the deficiency in the epithelial layer of the cornea extended across the whole cornea and was about 1 mm in width The adjoining parts of the cornea were decidedly hazy, both eyes were in about the same condition At this time there was but little secretion from the conjunctiva On the sixth day the entire lower half of the cornea of the right eye was very hazy The deficiency of the epithelial layer had not increased in extent The left eye remained as before He had but little pain, but the photophobia continued On the ninth day there was a decided improvement in the condition of the corneæ of both eyes There was less haziness, and the deficiency in the epithelial layer was gradually filling in On the fourteenth day the corneæ were clear and there was no longer a defect in the epithelial layer, the lids were normal or very nearly so, and there was no secretion from the conjunctiva He was free from pain, but still had photophobia On the twentieth day both eyes were normal The refraction was hypermetropia 2 D S 6/5, both eyes alike

There can be no doubt, I think, that the eye disease was caused by the entrance of the chrysarobin salve in the conjunctival sac Whether the corneal disease was due to the direct action of the chrysarobin or was caused by the conjunctivitis, I am unable to say The disease of the cornea certainly made the case a much more serious one, as it endangered the sight of the eye Fortunately, it passed away without leaving even a slight opacity of the cornea

With regard to the treatment given in this case, I may add that I should not use cocain in such a case unless the pain could not be relieved by the other means employed The tendency to exfoliation of the epithelium of the cornea is always great in such cases and is

doubtless increased by the cocain, especially if the eyes are kept open In this case the eyes were kept closed for several days and I do not think that the shedding of the epithelium was caused by the use of the cocain Holocain, which is also a local anesthetic for the cornea, is said to be free from this objectionable quality, but my experience does not confirm this In most cases atropin and warm applications to the lids is all that is required to subdue the pain

A primary disease of the cornea as the result of the application of a 20 per cent chrysarobin salve to other parts of the body than the head, beginning after four weeks' use of the salve, is described by P Krause[1] In this case a ring-shaped opacity developed in the parenchyma of the cornea, which disappeared in a short time under the use of warm applications and instillation of atropin, but returned after the applications of the chrysarobin were resumed, and again disappeared under the above mentioned treatment in eleven days He reports also another case in which furrows running radially somewhat like herpetic eruptions on the cornea were present In this case the eye disease developed on the fifth day after the beginning of the chrysarobin application The eyes were normal in about a month

The fullest account of this affection is to be found in the recent work of Lewin and Guillery[2] It is there stated that the development of a conjunctivitis has been observed after the external use of chrysarobin even in cases in which it was not applied to the face In 4 to 5 per cent of patients treated with chrysarobin chloroform solution, a conjunctivitis was observed after twelve to twenty-four hours first in one eye, and a few hours later in the other In the beginning the patient experiences an intense smarting and burning and edema, unpleasant sensations of heaviness in the eyes The pain increases, blepharospasms appear, lachrymation is increased, and sometimes there is also a slight degree of photophobia The conjunctiva of the eyeball and of the lids, especially that of the lower lid, is intensely injected The conjunctiva of the upper lid may be intact The cornea need not be affected, although ulcers of the cornea have sometimes occurred in connection with the conjunctivitis The ante-period of this affection lasts three to four days The injection of the conjunctiva continues for a longer period The eyes are normal again after eight to ten days with or without treatment There is no secretion from the conjunctiva In the eye last affected the symptoms are usually less severe and disappear more quickly than in the eye first affected The affection may disappear spontaneously, but may also be followed by unpleasant sequences This conjunctivitis is to be regarded as a resorptive action, more especially since small quantities of the chrysarobin chloroform solution when introduced in the eye produce a mucopurulent inflammation but such is not the case in the chrysarobin conjunctivitis also because an infection by means of the fingers could be excluded, because the conjunctivitis reappears with every new application of the chrysarobin and because the resorption from the skin was proved If chrysarobin enters the conjunctival sac in the form of a powder or as a salve a catarrhal conjunctivitis is developed which may be followed by chemosis and even by ulcers of the cornea

In the discussion following the reading of a paper entitled "The Therapeutic Value of Chrysophanic Acid in Dermatology," read by Dr Charles James Fox[3] Dr Henry C Baum said that he thought the chrysarobin should be used on the scalp only in exceptional cases Kaposi himself had warned his pupils regarding the possible dangers of applying the drug in that locality Dr Baum said that he had seen a number of cases of violent dermatitis follow the use of chrysarobin on the scalp He recalled an instance where a physician had applied a small amount of chrysarobin to a ringworm on the nose of a young woman It produced a violent dermatitis, which extended to the eyes and culminated in complete blindness In every instance in which this drug was applied to the face or scalp the case should be watched with the greatest care, and only a small area treated at a time until the individual idiosyncrasy of the patient can be determined In the same discussion Drs R A McDonald and Edmund L Cocks said that they had applied the drug to the scalp with very satisfactory results and without producing conjunctivitis Dr L Weiss said that in using chrysarobin on the face and scalp the possible resulting dermatitis could be prevented from spreading by the application of zinc gelatin which acts as a compress

My patient, after he had recovered from his eye trouble, commented on his own case as follows Vanity caused me to apply to a doctor to remove the redness from my nose, his salve did not cost much, but it disabled me for work for three weeks I have suffered much pain and I still have my red nose

1 Ztschr f Augenheilkunde xv 273
2 Die Wirkungen von Arzneimitteln und Giften auf das Auge ii 777

MALIGNANT TUMOR OF THE TESTICLE

DAVID L WALMSLEY, MD
DETROIT

Two cases of this disease are reported in THE JOURNAL February 9 and March 30 I wish to add a third case

Patient—On July 22, 1906, Mr W, aged 40 married, one child, healthy up to the present consulted me for the first time

History—The case dates back to injury to the right testicle by a baseball during high school days Pain and swelling followed the injury, and atrophy followed the subsidence of the local symptoms The left testicle was normal The man became reconciled to his injury, and being fully developed in every respect, paid no further attention to the deformity until the beginning of July, 1906 when his attention was drawn to it by a feeling of fulness and slight uneasiness of the atrophied organ His family history is good I advised close watching of the parts On September 20 I again examined the patient finding the atrophied testicle the size of an ostrich egg The tumor was semisolid smooth and egg shaped Light, not transmitted, slightly tender on pressure

Treatment and Result—Feeling suspicious of malignancy, I removed a specimen and submitted it to Dr F H Hayward pathologist to the board of health, whose examination determined malignancy, and I operated Sept 22 1906 The patient made a good recovery and was dismissed with instructions to return for inspection

Dec 4 1906 He returned complaining of slight uneasiness in the stump which he thought was enlarging I discovered a nodule on the end of the stump and advised removal at once this however was delayed until Jan 6 1907 when I removed the cord high up and with it the lymphatic glands and adipose tissue hoping thereby to ward off recurrence To date of writing (April 25) there are no indications of recurrence The patient feels well and enjoys living were it not for the eternal dread of returning trouble

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SATURDAY, MAY 18, 1907

UNIFORMITY IN THE STRENGTH OF TETANUS ANTITOXIN

Tetanus antitoxin is undoubtedly of great value as a prophylactic and immunizing agent, its efficacy having been fully confirmed by both laboratory studies and numerous clinical experiences It is highly important, therefore, that a standard unit for this serum should be provided such as now renders the administration of diphtheria antitoxin so accurate and satisfactory The necessity for such a standard is evidenced by the fact that in this country, until recently, there were as many methods of standardizing tetanus antitoxin serum as there were manufacturers

The standardization of this serum is a very difficult problem, and a vast amount of study has been devoted to its solution. Work on this subject has been carried on in the Hygienic Laboratory of the Public Health and Marine-Hospital Service for the past two years, with the result that a stable tetanus toxin has been obtained This toxin, when preserved under conditions of absolute dryness *in vacuo*, and in the cold and dark, retains its strength for many months, and under ordinary conditions loses its strength very slowly A satisfactory official standard is thus made possible, and we note with pleasure that the Public Health and Marine-Hospital Service[1] has now undertaken the important task of establishing an American standard

As we have previously stated,[2] the official unit went into effect April 1, 1907, the committee of experts appointed by the Society of American Bacteriologists having recommended that "tetanus antitoxin be standardized by the tetanus toxin furnished by the Public Health and Marine-Hospital Service The unit is ten times the least amount of serum necessary to save the life of a 350-gram guinea-pig for 96 hours against the official test dose of the standard toxin The test dose is 100 minimal lethal doses of a precipitated toxin preserved under special conditions at the Hygienic Laboratory of the Public Health and Marine-Hospital Service It was decided that the minimal immunizing dose for a case of possible infection through a wound should be 3,000 of such units It was decided that after April 1 the new unit should be adopted by all producers of tetanus antitoxin"

1 Public Health Reports P H and M H S vol xxii No 3 Jan 18 1907 43
2 THE JOURNAL A. M A. Jan 26 1907 308

The necessity of establishing uniformity in this respect is strikingly shown in the results of examinations of different serums sold on the market The units claimed per cubic centimeter by the manufacturers of seven samples varied from 0 1 to 6,000,000 and the units per c c actually contained in these samples, according to the American standard, varied from 2 to 769 It is evident from these figures that there has been a marked difference in the potency of the serum found on the market, due to the great discrepancy in former systems of measurement

With the adoption of the new standard an accurate dosage of antitetanic serum will be made available for both prophylactic and therapeutic purposes, and more reliable data will be secured regarding its beneficial effects With the preparation of this standard and its subsequent supervision by the Public Health and Marine-Hospital Service a serum of undoubted purity and definite potency is assured

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THE NOMENCLATURE OF SYNTHETIC MEDICINES

The difficulties and disadvantages connected with the present nomenclature of the rapidly increasing number of synthetic chemicals introduced into medicine is forcibly presented in a recent issue of the *British Medical Journal* Three phases of the difficulty present themselves 1 The distinctive and systematic chemical terms are too meaningless to the ordinary physician and too long and cumbersome for common use 2 The shorter names introduced by the manufacturers are arbitrary and, being protected by registration, are intended to prevent the use of the products of rival houses when the patents expire 3 If a preparation shows any degree of popularity it is likely to be introduced by other firms under new names so that the multiplicity of names for the same article becomes confusing Further, it is possible that a substance which has proved unsatisfactory may be again introduced under a new name and be considerably used before its true character and worthlessness is discovered This has often been done Frequently, also, a substance is introduced in various countries under different names, therefore, an international nomenclature is needed As a remedy for these evils it has been proposed that unregistered coined names be provided for the new synthetics and that such names be published in the *Chemist's Annual*, which is a special yearly issue sent to all members of the Pharmaceutical Society of Great Britain

The question is one that concerns the medical profession more than the pharmaceutical, since the physician must first use the name in prescribing, and while the pharmacist will be justified in using any preparation of the chemical if it is prescribed under a non-protected name, his knowledge of such a name will not justify him in substituting if the physician, ignorant of such a name, has used the protected one chosen by the pro-

prietary manufacturer Some medium is needed to secure wide publicity of these names among the members of the medical profession The names should be authoritative, convenient and systematic, but should not indicate, as suggested by the *British Medical Journal,* the therapeutic properties of the drug In rare cases in which the chemical composition is not too complex a name indicating its derivation might be chosen That something should be done no one will deny, but just what, and how, is a difficult problem to solve Conditions are getting to be almost unbearable, new names are coined daily, and no one is consulted, except as suits the manufacturer or the one who introduces the product

The coined names themselves are very often misleading giving false indications of origin or quality, and under the Food and Drugs Act such names as these are excluded from interstate commerce The chief difficulty is the property right in a registered name This opens up an inviting field of gain by permitting the sale of the same article under as many different names as the imaginative manufacturer can create The whole system is intolerable from the scientific view of medicine and pharmacy

Until recently there has been no person or organization that could take up the matter At present the Council on Pharmacy and Chemistry, if it were authorized to do so by the American Medical Association, might take up the subject and work it out Or some central body might be organized which would represent the American Medical Association, the American Pharmaceutical Association, the American Chemical Society, the Society of Chemical Industry and the Committee of Revision of the United States Pharmacopeia In this way definite, practical results would follow and an end be put to the hopeless confusion that now exists

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MEDICINAL FOODS

The report on medicinal foods by the Council on Pharmacy and Chemistry of the American Medical Association, which was printed in THE JOURNAL last week (page 1612), contains information of vital importance to all practicing physicians In order that when they use these preparations they may do so on a rational basis, it would indeed, be well if every doctor in the country would read and read again, first, the report of the Council, and then as a comment thereon Dr Edsall's letter in this issue (page 1694) It has been said that publicity is the best remedy for certain public evils The facts in regard to so-called medicinal foods—their failure to measure up fully to what has been and is claimed for them their great relative cost, their dangerous alcohol content, and the likelihood that some physician following blindly the optimistic suggestions of those commercially interested will do his patients harm—these facts are now public, and every intelligent physician who becomes familiar with these facts may be counted on to take the necessary steps to guard himself and his patients against placing more confidence in these articles than they deserve

But, in order that publicity in this case shall have the desired effect promptly and decisively, it must be made general and the facts, humiliating as they are, must reach the rank and file of the profession all over the country In view of the importance of this matter it is nothing less than a duty that those who, as active workers and leaders, are committed to the promotion of general professional efficiency and progress, take special pains to direct the attention of their colleagues to the facts now presented in regard to medicinal foods Clearly greater general interest must be taken in the homely but important subject of dietetics The manufacturers have shown themselves very active dietetic teachers, but the place assumed by them should be reclaimed by the therapeutist, who should take deeply to heart Dr Edsall's plea for greater exactness and thoroughness in dietetic teaching and practice

On the other hand, let us as physicians not forget to take on ourselves the blame which lies at our door Some of these manufacturers have stated exactly the content of the products, and the physician is presumed to draw his own conclusions as to whether it is possible for the products to do what the manufacturers claimed for them It should be further said to the credit of some of the manufacturers that when the Council called their attention to certain statements they readily complied with the suggestion to modify such statements

This general subject was taken up by the Council, and a special committee appointed to report on it, because when it faced the problem of passing on certain of these articles, it realized that it was a problem that did not apply to one product only but to all as a class The results of the experimental work of the committee and its deductions and conclusions will of course not be startling or new to those who have been especially interested in the question but it is the first time that the subject has been brought directly to the attention of the medical profession in a practical manner We understand that some of the products mentioned in the table will be approved by the Council but in the description published in New and Non Official Remedies a definite statement will be made not only as to the alcoholic content, but as to the caloric or actual food value of the product, so that the physician will be able to use his judgment as to whether or not it is what he wants in individual cases

LATIN DERIVATIVES IN MEDICAL WRITING—THE USE OF THE INTERNATIONAL MOTHER TONGUE

The attention of medical writers is directed to the interesting plea on page 1714 for the use of Latin derivatives in order to facilitate the reading of articles by foreigners The immediate advantages of the plan are so evident and they are so well stated in the "plea" itself that further elaboration really is unnecessary except by way of emphasis The importance of exact titles for medical and scientific articles has often been discussed Many an important observation has escaped deserved notice and remained buried in the literature deprived of opportunity to influence the development of knowledge because of misleading, incorrect or inadequate title On account of the enormous extent of the current medical literature of the present day, it is more important than ever that the title should reveal at a glance the special topic and the scope of the article Otherwise the article is likely to remain unnoticed by those who would profit most by it and who would make the best use of it, namely, the special worker in the same special field as that with which the article is concerned Exact, specific titles also help to lighten the labors of librarians and of others who perform the useful functions of indexing medical literature so as to make its contents readily available for the student Furthermore, the effort on the part of the author to formulate an expressive title—often a difficult task—may serve to concentrate the attention on the construction and order of his article and on the important question, only too commonly neglected, whether the article conveys in the briefest form consistent with clearness the real message he desires it to bring Now, in view of the increasing extent as well as importance of American medical literature, our authors certainly will further its recognition and, what is more important, aid general scientific progress by the use, especially in the titles of their articles, of terms the meaning of which is grasped readily by educated physicians elsewhere The value of cooperation in medical progress needs no emphasis and by proper attention to details like those spoken of here medical writers will do much to promote general cooperation

THE ARMY MEDICAL DEPARTMENT

Although the Fifty-ninth Congress enacted some useful measures which had long been desired and needed by the country, the credit due therefor is somewhat offset by its neglect to grant relief in other directions, and among the latter the failure on the part of the lower house to provide a more effective organization for the Army Medical Department can not be regarded otherwise than as a very grave omission This failure is entirely due to the action of Mr Cannon, the speaker, who for some occult reason has either failed to understand the necessity for the legislation, or understanding it, has some personal reason for not favoring it The Army Medical Department was reorganized in February, 1901, at which time the Army was largely increased, the peace footing being placed at 60,000 men and that for war at 100,000, while the medical department was organized for an army of only 40 000 men Moreover, the lower ranks in the medical department were increased out of all proportion to the upper ranks, so that now as regards the prospect of promotion the department offers less inducements than any other in the Army Owing to the shortage of commissioned medical officers it is necessary to employ from 150 to 200 civilian physicians by contract to supply the existing deficiency The necessity for relief in this matter is patent and urgent The medical profession of the country, as represented by the American Medical Association, has time and again urged that the needed law be enacted The President, Secretary Root, Secretary Taft and others have urged it The Senate passed the bill twice and the House was willing to pass it, but the speaker refused to let it come up Mr Cannon is, therefore, wholly responsible for its failure and on him must rest the entire blame and responsibility It is impossible to get competent young physicians to fill the vacancies in the grade of assistant surgeon, notwithstanding that every possible effort has been made to do so The number of candidates for these positions this year is surprisingly small The War Department believes the explanation of this is to be found in the neglect of the medical department by Mr Cannon, the speaker of the House, and that unless the condition of the Army Medical Corps is improved it will be more and more difficult to fill the vacancies

A REMOTE DANGER OF PARAFFIN PROSTHESIS

A few cases are coming to light which indicate a possible accident from the use of paraffin for prosthetic purposes, which might have been anticipated, but which apparently has been entirely overlooked This consists of a connective tissue overgrowth at the site of the paraffin injection, as a result of the long continued slight irritation produced by the presence of the paraffin Heidingsfeld[1] has recorded two cases of this sort in which paraffin had been used by "beauty doctors" for the removal of wrinkles or hollows about the face and neck In these two cases there had developed at the site of the injections reddish tumor-like masses from the size of a pea to that of an English walnut and of the appearance of keloids A similar case was recently shown at the Chicago Dermatological Society by Armsby In this case a beautifier had injected paraffin into the lower lids and between the eyes to remove wrinkles The result was eminently satisfactory for about a year, then, however, tumors began to develop at the sites of the injections, and when the patient was exhibited there existed in either lower lid and in the glabella an oval tumor of the size of a large olive These masses were hard and dense, the skin over them was of a purplish color and they bore a striking resemblance to sarcomata At the time that this patient was shown the tumors were still growing and had been increasing in size for several months The amount of deformity produced by these large purplish swellings can readily be imagined Sections from these cases show a connective tissue overgrowth, like a granuloma, with many giant cells and other evidences of a chronic inflammatory process produced by a long-continued irritation of low grade The tumors present

1 Jour Cut Dis November 1906

many similarities to keloid and it is possible that their treatment will be by no means satisfactory These accidents, of course, belong in a different category from those in which deformity is produced from the unskilful use of paraffin or from accidents which result in the deposition of the paraffin in improper places or to an excessive amount The formation of these tumors is an accident which can not be guarded against or prevented, and the accidents suggest that before one uses paraffin for the relief of trivial troubles like wrinkles he should ponder the possibility of an untoward result In fact, this possibility makes it exceedingly questionable whether the use of paraffin prosthesis is justifiable for the treatment of slight cosmetic troubles

Medical News

ALABAMA.

Personal.—Dr M L Tidwell, Evergreen, has been assigned to duty as an interne at Bryce Hospital, Tuscaloosa ——Dr Willis W Scales, formerly quarantine physician at Fort Morgan, has been assigned to duty at Colon, Panama ——Dr Gregorio M Guiteras has taken charge of the Marine Hospital, Mobile ——Dr James J Peterson, Mobile, is reported to be dangerously ill with appendicitis at the Inge Bondurant Sanitarium

CALIFORNIA.

Commencement—The commencement exercises of Cooper Medical College, San Francisco, were held May 8 The address of the evening was delivered by Rev George W Stone and a class of 28 was graduated

Spinal Meningitis—Spinal meningitis is reported to be epidemic in the Sacramento Valley A largely attended meeting has been held in Woodland to investigate the cause of the disease and to discuss the situation

Society Meeting—Butte County Medical Society, at its annual meeting in Chico, elected Dr Buchanan Caldwell, Biggs, president, Dr Lewis Q Thompson, Gridley, vice president, Dr Ella F Gatchell, Chico secretary treasurer, Dr Oscar Stansbury, Chico, censor and delegate to the State Medical Society, and Dr Labon C Perdue, Chico, alternate

Personal.—The Board of Health of Chico has organized with Dr John W Harvey as president, and Dr Wasley, health officer (re elected) ——Dr O D Hamlin, chief surgeon of the Oakland Receiving Hospital, has been given 90 days leave of absence and will visit the Atlantic seaboard ——The City Council of Alameda has appointed the following board of health President Dr J Emmet Clark Drs Harold A Miller, James K. Hamilton and Ernest M Keys The board has appointed Dr L W Stidham city physician ——Dr Ernest Barry, San Francisco, while visiting in Monterey April 26, fell from a balcony, fracturing the pelvis ——Dr John H Kuser, Novato, has been appointed physician of Marin County, vice Dr William J Wickman San Rafael

Hospital News—The University of California Hospital, San Francisco, was opened to receive patients, April 15 The institution has a capacity of 42 patients and the attending staff includes the faculty of the University of California Medical Department ——The Saint Caroline's Hospital, Redding, will be completed early in September at a cost of more than $20 000 It is a two story and basement structure 56 by 72 feet in the mission style of architecture There will be two wards of six beds each and also ten private rooms ——The Santa Monica Bay Hospital, erected by a corporation composed of local physicians at a cost of $25 000 with a capacity for 25 patients will be open to the public early in May —— The Mammoth Copper Company has completed a hospital with two private wards and a ward containing eight beds with accommodation for operating rooms for physicians and nurses at a cost of $10 000 at Kennett ——The cottage hospital at San Rafael was formally opened May 9 The medical staff consists of Drs Harry O Howitt, William T Wickham and William F Jones

DISTRICT OF COLUMBIA.

March Mortality—During March 1 558 deaths were reported 42 less than in February 69 more than in March 1906 and 308 more than the average number of deaths for the month during the five years preceding This is equivalent to an annual death rate of 18 06 per 1,000 The deaths reported from infectious diseases were 293, or 18 8 per cent of the total mortality Chief among the death causes were pneumonia, 242, nervous diseases, 173, heart diseases, 165, consumption, 143, influenza, 87, accidents and violence, 78, and bronchitis, 63

To Help Internes.—Commissioner McFarland has provided a plan to improve the status of internes at the Washington Asylum Hospital which provides for their promotion to resident physicians and physicians to the poor The plan provides that internes shall be appointed by competitive examination, that when an interne has served one year and passed the district examining board and licensing board he shall be promoted to the position of resident physician for six months then he shall be transferred to the Home for the Aged and Infirm for a like term, and then to the Tuberculosis Hospital serving six months as a resident physician If, at the end of this time his record moral and professional, is good, he shall be appointed physician to the poor

GEORGIA.

District Society Meeting—The next meeting of the Sixth District Medical Association of Georgia will be held at the Wigwam Hotel, Indian Springs June 12

Change in Medical Journal.—Dr Miller B Hutchins Atlanta, has disposed of his entire interest in the *Atlanta Journal Record of Medicine* and retired from its management May 1

Tuberculosis Prevention.—The Atlanta Sanitary and Tuberculosis Prevention Society was organized May 6, when a constitution presented by a committee consisting of Drs Rufus R Kime and J E Summerfield, and Eugene Mitchell was presented for adoption

Medical Club Formed—An organization known as the Emory Club was organized March 21 by the students of the Atlanta School of Medicine The club is composed of graduates of Emory College and will work in the interest of that college and of the Atlanta School of Medicine

In Memory of Pioneer Anesthetist—At a meeting of the Jackson County Medical Society, held in Jefferson, April 10, a monument to the memory of Dr Crawford W Long was presented by the society to the city of Jefferson and Jackson County The monument is to be erected on the spot where Dr Long first performed a surgical operation under anesthesia

Commencement Exercises—The commencement exercises of the Medical College of Georgia, Medical Department of the University of Georgia, Augusta were held May 1 when a class of 21 was graduated Diplomas were presented by Chancelor David Barrow, and the address of the evening was delivered by Rev S R. Belt ——The annual commencement exercises of the Atlanta College of Physicians and Surgeons were held April 27, and a class of 37 received diplomas The address of the evening was delivered by Hon Robert C Alton and the diplomas were conferred by Judge Howard Van Epps ——The commencement exercises of the Atlanta College of Medicine were held April 23 when a class of 20 received diplomas from the hands of Bishop C K Nelson vice president of the board of trustees Rev James W Lee delivered the annual oration

ILLINOIS

Maternity Opened—The Elizabeth Williams Memorial Hospital the maternity department of the Evanston Hospital just completed at a cost of $25 000 was formally dedicated May 9

Smallpox—A case of smallpox has occurred at Pushville said to have been imported from Beardstown ——On account of the prevalence of smallpox at Tremont the commencement exercises at the high school have been postponed

Personal.—Dr and Mrs Robert A Noble Bloomington have returned from abroad ——Dr Frederick W Werner Joliet who has been ill with sciatica is reported to be improving —— Dr T J Fenton Philo is reported to be critically ill at the Burnham Hospital Champaign ——Dr Leigh J Schwartz Highland Park sailed for Europe May 2

Civil Service Examination.—The State Civil Service Commission announces that it will call an examination for assistant physicians in the hospitals for the insane interne and possibly a psychopathologist in June The positions pay from $75 to $125 per month and board in the majority of cases The position of psychopathologist will if it is filled pay not less than $2 000 a year The new institute to be

located at Kanlakee and the psycho pathologist will live there

Society Meetings—The thirty first annual meeting of the Brainard Medical Society was held at Lincoln, April 25, jointly with the Logan County Medical Society The following officers were elected President, Dr Calvin C Montgomery, Lincoln, vice presidents, Drs Archibald G Servoss, Havana, Don W Deal, Springfield, and John W Bozarth, Mount Pulaski, secretary, Dr Harry S Oyler, Lincoln, treasurer, Dr Charles C Reed, Lincoln, and censors, Drs John M. Wilcox, Clinton, William A. Mudd, Athens, and Charles M. Noble, Bloomington ——At the thirty third annual meeting of the Central Illinois District Medical Society, held in Pana, April 20, the following officers were elected President, Dr Frank P Auld, Shelbyville, vice presidents, Drs Ben B Griffith, Springfield, and Don W Deal, Springfield, treasurer, Dr John N Nelms, Taylorville, and secretary, Dr Roscoe C Danford, Pana ——At the regular monthly meeting of the Champaign County Medical Society, April 11, the following resolutions were unanimously adopted

WHEREAS In certain parts of the county fees are allowed for treatment of pauper cases, while in other parts of the county the payment is refused be it

Resolved, That it is the sense of this society that operation fees and full fees for attendance be charged for treating pauper cases on orders from supervisors be it further

Resolved That this resolution be binding on the members of this society immediately on its adoption be it further

Resolved That a committee of three be appointed to confer with the board of supervisors at their next meeting

Chicago

Bequest to Hospital.—By the will of James Henry Smith, $100,000 is bequeathed to St Luke's Hospital, of which he was a trustee

Contagious Diseases—During the week ended May 11, 99 cases of scarlet fever, 66 cases of diphtheria and 117 cases of measles were reported Measles and whooping cough are reported to be very prevalent

Promotions in University of Chicago—Dr Robert R. Bensley has been made professor of anatomy, Edwin O Jordan professor of pathology and bacteriology, and Drs Horace T Ricketts and Norman M Harris assistant professors in pathology and bacteriology

Personal—Dr Albert I Bouffleur has returned after a few months in California ——Dr and Mrs Alfred C Croftan are visiting in Pasadena, Cal ——Dr William H Knapp is reported to have been seriously injured in the accident on the Mexican Central Railway, at Bermejillo, Mexico, May 11

Deaths of the Week.—During the week ended May 11, 47 fewer deaths were reported than during the previous week the respective numbers being 717 and 764, equivalent to annual death rates of 17 74 and 18 90 per 1 000 respectively Pneumonia caused 153 deaths, consumption, 92, heart diseases, 59, nephritis, 49, violence, including suicide, 46, cancer, 31, diphtheria and scarlet fever, each 10, whooping cough, 8, typhoid fever, 6, and influenza 5

INDIANA.

State Association Meeting—The fifty eighth annual meeting of the Indiana State Medical Association will be held at Indianapolis, May 22, 23 and 24

Society Meetings—At a meeting of the Eighth District Medical Association, held at Union City, April 18, Dr General W H. Kemper, Muncie, was re elected president, Dr Maynard A Austin, Anderson was elected secretary treasurer, Dr Etta Charles, Summitville, censor, and Dr Frank G Keller, Alexandria, commitee on arrangements ——At a meeting of the Third District Medical Association held in Bedford, Dr Charles P Cook New Albany, was elected president, and Dr William C. Cauble, Salem, secretary

KANSAS

Personal.—Dr Matthew R. Mitchell has been appointed city physician of Topeka ——Dr Charles B Van Horn has been made president, Dr Matthew R. Mitchell, secretary, and Dr May Stout, a member of the Topeka Board of Health —— Dr William S Fleming, Arcadia, sustained serious bruises in a runaway accident April 23

Graduation Exercises—The seventeenth annual commencement exercises of the Kansas Medical College, Medical Department of Washburn University, Topeka, were held April 16, when a class of 14 was graduated Dr William S Lindsay, dean of the college, conferred the degrees, and the address to the graduates was delivered by Dr Henry B Ward, Lincoln, dean of the Medical Department of the University of Nebraska

Communicable Diseases—During the first quarter of 1907 317 cases of measles were reported in Topeka ——Smallpox is reported at Buffalo Gap, Sycamore, Avoca and Stamford —— Two cases of smallpox have occurred among the convicts at the State Prison, Lansing ——On account of a case of smallpox in Elmdale, April 26, the city schools were closed ——The prevalence of measles in Kansas City threatens the closure of the public schools During the last week of April six deaths resulted from the disease, and on the first two days of the week 52 cases were reported It is believed that there are at least 400 cases in the city

KENTUCKY

Delegate to Milk Commission—The milk commission of the Jefferson County Medical Society has appointed Dr Henry E Tuley a delegate to the Conference of Milk Commissions of the United States, to be held at Atlantic City June 3, at which time an association will be formed Dr Henry L. Cort of Newark, N J, is temporary chairman

Personal.—Dr Homer Blaine, mayor of Cadiz, has been appointed captain and assistant surgeon, Ky N G, and assigned to duty with the Third Infantry ——Dr Henry C H Gunkel, Newport, fractured two of his ribs in a fall down stairs May 3, and, on account of his advanced age, his condition is considered serious ——Dr George W Ronald, Louisville, is reported to be critically ill with congestion of the brain

Tuberculosis Dispensary—The dispensary for tubercular patients, established under the auspices of the Kentucky Anti Tuberculosis Association, will open June 1 The committee reports that a suitable house has been found on Chestnut Street, between Brook and Floyd No patients will be housed in the building, but individuals suspecting that they have tuberculosis will come to the dispensary to be examined by the physician on duty

State Hospital Changes—Announcement has just been made of the following appointments by the State Board of Control of Charitable Institutions Dr Lewis H Mulligan, Lexington, superintendent at the Central Kentucky Asylum for the Insane at Lakeland, Dr J W Stephenson, Todd County, superintendent at the Western Kentucky Asylum for the Insane at Hopkinsville, and Dr Alexander Bailey of Franklin County, superintendent of the Feeble Minded Asylum, Frankfort, to fill vacancies caused by resignations The board also formulated rules for the governing of the institutions under their charge, business methods according to the system of an audit company have been installed in all, and they will be controlled from the central office The institutions have been placed in the complete charge of the superintendents

MARYLAND

Baltimore

Disposition of Tuberculosis Fund—The Maryland Association for the Prevention and Relief of Tuberculosis will use the fund of $10 000 recently raised to maintain three tuberculosis nurses, to display throughout the city and state a tuberculosis exhibit with daily addresses by the secretary, to distribute literature and to establish two or three tuberculosis dispensaries

Personal.—Dr Henry Barton Jacobs sailed from New York for Europe May 8 ——Dr David Street was thrown from his carriage in a collision May 9, and severely bruised ——Dr William N Hill is head of the "mosquito brigade" sent out by the health department.——Among the medical men who will receive honorary degrees from the University of Maryland at the approaching centennial are Drs William T Councilman and J Homer Wright, Boston, Major James S Carroll, surgeon U S Army, Dr J Ford Thompson, Washington, D C, Drs Charles P Noble and Alexander C Abbott Philadelphia, Drs Nathaniel G Keirle and Thomas C Gilchrist, Baltimore

MASSACHUSETTS

Scarlet Fever Closes Schools—On account of the existence of scarlet fever the Mary A Livermore grammar school Melrose has been closed for four days ——The prevalence of scarlet fever among the students and attendants at Lawrence Academy, Groton, caused its closure on May 3 for ten days

To Investigate Light in Schools—As a result of numerous complaints that the coloring of the walls and the bad lighting of the English High School were injurious to the eyes of the pupils the Boston School Board has appointed a committee to investigate conditions and report to the board The committee includes two expert electricians and Drs George S Derby Frank I. Proctor and Myles Standish

MICHIGAN

Graduation Exercises—The eleventh annual commencement exercises of the Grand Rapids Medical College were held May 2, when a class of ten was graduated. The address was given by Dr. George L. McBride, and the degrees were conferred by Dr. Francis J. Lee.

Communicable Diseases—More than 200 cases of measles are reported at Elmira.——More than one fourth of the school children of Morris are reported ill with measles.——The physician of Houghton County announces a number of cases of smallpox in Houghton, Keweenaw and Baraga counties.——Two students at the State Normal College, Ypsilanti, have smallpox.

Personal.—Dr. and Mrs. Theodore E. Sands, Battle Creek, returned from Europe April 20.——Dr. A. Marion Allen, the oldest practitioner of Adrian, has decided to retire from active practice.——Dr. C. Henri Leonard, for more than 25 years a member of the faculty of the Detroit College of Medicine, has been made emeritus professor of the diseases of women and clinical gynecology.

MISSOURI.

New Hospital.—Work has begun on the new St. Mary's Hospital, Kansas City. The plans call for a three story and basement structure, to cost about $200,000.

Interne Examination—A competitive examination for positions at the St. Louis City Hospital will be held by the board of health May 20. Thirty two appointments will be made following the examination, which is open to students of the various medical colleges of the city.

Graduation Exercises—A class of 26 was graduated at the thirtieth annual commencement of the Ensworth Central Medical College, St. Louis. The address of the evening was delivered by Rev. Sanford P. Cresap, and Dr. Jacob Geiger, the dean conferred the degrees.——The annual commencement exercises of Barnes Medical College, St. Louis, were held May 11, when a class of 76 received diplomas. The alumni banquet of the college was held May 7.

Personal—Dr. Walter C. G. Kirchner assumed charge of the St. Louis City Hospital May 1, vice Dr. John Young Brown, resigned.——Dr. Henry S. Brookes has succeeded Dr. Eugene J. Neville as surgeon to the St. Louis fire department.——Dr. David W. Scott, St. Louis, was run over by a wagon May 1, while attempting to save a small child from being run over.——Dr. Elias Potter Lyon has been elected dean of the medical department of the St. Louis University, vice Dr. Young H. Bond. Dr. William G. Moore has been re elected vice dean.——Dr. William B. Winn has been confirmed as assistant health commissioner of St. Louis.——Dr. G. Wilse Robinson, Kansas City, has been made superintendent of State Hospital No. 3, Nevada, vice Dr. Larkin H. Callaway. Dr. Frank Devilbiss, Eugene, has been chosen assistant physician at the hospital, vice Dr. V. A. Williams, resigned.

NEBRASKA.

Medicine Vendors Barred—Itinerant medicine vendors have been barred by the city council from obtaining licenses to sell their wares on the streets of Omaha.

Personal.—Dr. Lorenzo C. Voss has been appointed city physician of Columbus, vice Dr. Charles H. Platz, resigned.——Dr. George L. Miller, Omaha, has resigned as president of the Nebraska Humane Society.

Commencement.—At the annual commencement of the Creighton Medical College, Omaha, May 4, a class of 37 was graduated. At the banquet which was given the graduating class and alumni, Dr. Henry B. Jennings, Council Bluffs, Iowa, was toastmaster.

NEW YORK.

Signed by the Governor—The governor has signed the Dunn bill providing that managers of state charitable institutions who fail to attend the meetings of their boards or to make visitations for three successive months, shall be deemed to have vacated their positions unless the absence is excused by the governor.

Two Anticocain Bills Passed.—Without discussion or opposition the senate passed the bill making it a felony to sell cocain and eucain except on a physician's prescription, also the Whitney bill which also prohibits the sale of these drugs except on a physician's prescription but provides a different system of prosecution and less severe penalties.

Hearing on the Medical Board Bill—A hearing on the bill which proposes to create one medical board of examiners for all schools of medicine was held before the governor on May 9. The homeopaths and eclectics bitterly opposed the bill on the ground that it is class legislation. The speakers for the bill included Drs. Arthur Root of Albany, for the Medical Society of the State, Frank Van Vleet of New York, for the Medical Society of New York, and Howard J. Rogers.

Recommends Long Lease of Ward's Island.—The Hospital Commission, at its last meeting, recommended that a fifty years' lease of Ward's Island to the state be entered into by the city on condition that the state construct on the island a modern hospital for the insane poor of the city. This commission has been in existence for about a year, and one of its tasks is to decide what to do about a new Bellevue Hospital and to simplify hospital regulations. It will recommend whether a central hospital to take the place of Bellevue be constructed at a cost of twelve to fifteen million dollars, using the site now occupied by Bellevue, or whether the money shall be spent in erecting three or four hospitals in various parts of the city.

New York City

Large Gift to Hospital.—The will of the late James Henry Smith bequeaths $100,000 to the Orthopedic Hospital. The testator was a trustee of the hospital.

Hospital Removal Bill Vetoed.—Mayor McClellan disapproved of the bill passed by the legislature to prevent the removal of dying patients from different hospitals to Bellevue.

Mayor Approves of Milk Stations—Mayor McClellan has signed the resolution adopted by the Board of Aldermen asking the Board of Estimate and Apportionment to issue special revenue bonds for $8,000, the proceeds to be used for the erection of milk stations in the parks.

Alleged Unlicensed Doctors Held—Charles Conrad and Paul Schmitt were arraigned before the Yorkville police court charged with practicing medicine without a license. It is alleged by the prosecutor of the County Medical Society that the men posed as physicians and claimed that they could cure glanders.

Police Surgeons Districted—The twenty five police surgeons who make up the medical corps of the police department and who heretofore have been compelled to go from one end of the city to the other, according to where policemen lived, will hereafter have to attend only men living in districts to which they have been assigned.

Changes in Faculty—At a meeting of the faculty of Columbia University, the resignation of Dr. George H. Fox, professor of dermatology, was accepted. Dr. Francis Huber was appointed professor of clinical medicine, Dr. Frederick Peterson professor of psychiatry, Dr. Andrew J. McCosh professor of clinical surgery, and Dr. Pearce Bailey, adjunct professor of neurology.

Contagious Diseases—There were reported to the sanitary bureau for the week ended May 4, 492 cases of scarlet fever with 19 deaths, 445 cases of tuberculosis with 180 deaths, 534 cases of measles, with 12 deaths, 342 cases of diphtheria with 38 deaths, 88 cases of typhoid fever with 23 deaths, 56 cases of whooping cough with 9 deaths, 27 cases of cerebrospinal meningitis with 20 deaths, 74 cases of varicella and 3 of smallpox, making in all 2,061 cases with 310 deaths.

Personal.—Dr. Robert W. Hall and Dr. John J. White have been appointed fire surgeons at salaries of $3,300 a year. Dr. J. Bayard Clark sailed for Europe on the *Blücher* May 11.——Dr. Joseph D. Bryant had the degree of doctor of laws conferred on him by the chancellor of the New York University at a meeting of the faculty of the University and Bellevue Hospital Medical College, April 30.——The Medical Society of Athens, Greece, in recognition of the labors of Dr. Achilles Rose in medical onomatology, has elected him a corresponding member.——Dr. Louis W. Bremerman has resigned as associate professor of genitourinary surgery in the New York School of Clinical Medicine on account of his removal to Chicago.

NORTH DAKOTA

Changes at State Hospital.—Dr. Louis B. Baldwin, superintendent of the North Dakota Institution for the Feeble Minded, Crafton, has been appointed superintendent of the State Hospital for the Insane of North Dakota, Jamestown, vice Dr. Dwight S. Moore.

Society Meeting—The Sheyenne Valley Medical Society held its annual meeting at Valley City and elected the following officers: President, Dr. Carl L. Frumkin, Cooperstown; vice president, Dr. Albert A. J. Lang, Sanborn; and secretary treasurer, Dr. Willis C. Nolte, Dazey.

Smallpox.—Owing to the fact that occasional cases of small pox have been found in the towns around Grand Forks, and by reason of the risk involved of its spread at the breaking up of the lumber camps, the Grand Forks Board of Health has decided to insist on the state law requiring the vaccination of all children attending public schools

OHIO

Public Policy and Legislation.—The state and auxiliary committees on public policy and legislation of the Ohio State Medical Association will hold a joint meeting May 22 at Columbus The chief subjects to be discussed are "A Summary of Medical Legislation," Dr John W Clemmer, Columbus, "Illegal and Fraudulent Practitioners," Dr Walter H. Snyder, Toledo, "Education of the Public as a Check to Evils of Venereal Diseases," Dr Benjamin R McClellan, Xenia, "Medical Practice Legislation," Dr Charles A L Reed, Cincinnati, "Criminal Abortion," Dr Robert H Grube, Xenia, "The Advertisement of Venereal Cures in Public Press," Dr David R. Silver, Sidney, "Proprietary Medical Legislation," Dr George H Matson, Columbus, "The Public Health Service," Dr Walter W Brand, Toledo, "Tuberculosis Legislation," Dr Charles C Probst, Columbus, and "Medical Service in Public Institutions," Dr Gilbert E Robbins, Chillicothe

County Secretaries' Meeting—The secretaries of seventy five county medical societies of the state met at Columbus, April 25 Dr J H J Upham, Columbus, was made temporary chairman, and Dr Charles J Shepard, Columbus, temporary secretary It was decided to hold another meeting at Cedar Point at the time of the meeting of the state association in August, and to effect a permanent organization Among the papers read were the following "Address of Welcome," Dr Frank Winders, Columbus, secretary of the Ohio State Medical Association "The Relation of the Secretary to the Society and to the Profession," Dr Clyde E Ford Cleveland, secretary of the Cleveland Academy of Medicine and the Cuyahoga County Medical Society, "The Relation Between Local and District Societies" Dr Joseph S Rardin, Portsmouth, "How the Secretary's Work May be Made Easier," Dr Carrie Chase Davis, Sandusky, secretary of the Erie County Medical Society, "My Plans for the Struggle," Dr Cornelia B Kennedy, Findlay secretary of the Hancock County Medical Society "What Can a Secretary Do to Secure More Members?" Dr John B Donaldson, Lorain, secretary of the Lorain County Medical Society After luncheon which was served at the Neal House Dr Charles A L Reed Cincinnati spoke on medical legislation Dr John B Donaldson Canonsburg, Pa, secretary of the Washington County (Pa) Medical Society, spoke on "The Secretary and His Opportunity" Papers by Dr Hirschel Fisher Lebanon secretary of the Warren County Medical Society, on "How Can We Make Open Meetings More Successful?" Dr Horace Bonner Dayton councilor for the second district on "The Social Factor in the Life of the Successful Physician," Dr O M Wiseman Zanesville secretary of the Muskingum County Medical Society, on "Our New Doctors," Dr R H Grubb Xenia secretary of the Green County Medical Society on "How Does Postgraduate Study Help the County Medical Society?" and Dr N Worth Brown, Toledo, secretary of the Toledo Lucas Academy of Medicine on "How Does Postgraduate Work Help the City Medical Society?" comprised the afternoon's program The large attendance and the evident value of the meeting proved most encouraging and it is probable that meetings for conference and mutual helpfulness will be held regularly

PENNSYLVANIA.

Consumptive Camps—The senate approved the appropriation of $600 000 for sanatoria for indigent persons infected with incipient tuberculosis

Anti-Vaccination Bill.—A bill to permit the admission to schools of pupils whose physical condition makes vaccination dangerous to their health was passed finally by the senate May 7

Regulation of Marriage—The senate passed the bill to prohibit marriage on the authority of licenses issued more than 30 days prior to such ceremony, providing that no marriage licenses shall be issued unless the parties shall first give certain information and requiring this information to be certified to the department of health

Free Patients Barred.—It is stated that the White Haven Hospital for Consumptives will receive no more free cases after June 1 The cause is said to be due to want of funds and because the state appropriations during the past several years have not been sufficient to allow the institution to continue to receive the great number of poor patients applying for admission

For Hospital Investigation—The House of Representatives, May 6, adopted a joint resolution providing $20,000 for an investigation of the expenditures by asylums, hospitals and all semi public institutions which receive state aid The commission will report at the next session, suggesting new laws to govern the appropriations

Appropriations for Hospitals—The following appropriations were presented to the senate and approved by the house Jefferson Hospital, Philadelphia, $300,000, Douglass Hospital, Philadelphia, $32,000, Bellevue Hospital, $15,000, Warren State Insane Hospital, $250,000, Harrisburg Hospital, $53,500, Ridgway Hospital, $15,000, Philadelphia Lying in Charity Hospital, $20,000, Philadelphia Home for Aged Veterans, $23,000, Wills Eye Hospital, $70,000, Garrettson Hospital, $42,500, Philadelphia Sanitarium, $5,000, Philadelphia Maternity Hospital, $6,000, St Mary's Hospital, $30,000, St Vincent's Home, $10,000, West Philadelphia Hospital for Women, $10,000, Philadelphia Gynecean Hospital, $25,000, Kensington Hospital, $15,000, St Christopher's Hospital, $20,000, Philadelphia Home for Incurables, $45,000, Coatesville Hospital, $17,500, Easton Hospital, $30,000, State Hospital, Hazelton, $45,500, Williamsport Hospital, $65,000, Lebanon Hospital, $16,502, Chester County Hospital, West Chester, $16,000, State Hospital, Scranton, $166,878 74, Phoenixville Hospital, $15,000, York Hospital, $20,000, Norristown Hospital, $32,000 and Danville Hospital for the Insane, $429,300——By the will of the late Rev Samuel A Heilner the Methodist Hospital Philadelphia, will receive $10,000

Philadelphia

Interne Examination.—An examination for positions as resident physicians in the Philadelphia Hospital will be held June 4 The examination is open to any medical graduate

Jefferson Alumni Announcement.—The General Alumni Association of Jefferson Medical College announces a meeting at Atlantic City during the session of the American Medical Association The annual business meeting will be held in the college June 1, and the annual banquet will be held in the Bellevue Stratford the same day

The New Jefferson Medical College Hospital—The dedicatory exercises of the new Jefferson Medical College Hospital, which has just been completed at a cost of $1,500,000, will be held June 7 A picture of the building appeared in THE JOURNAL, May 4 Addresses will be delivered by Hon William Potter, president of the board of trustees, by Dr William H. Welch professor of pathology in Johns Hopkins University, representing medical science, and by Dr J Chalmers Da Costa, professor of surgery in Jefferson Medical College, representing the faculty and alumni

Gifts and Bequests—Mr Stephen Green, ex president of the board of trustees of the Methodist Hospital, has presented a building to that institution to be used as an isolation ward The building is to be one story high, of brick and terra cotta and will be erected at a cost of $6,000——By the will of the late John Simmons the Methodist Hospital will receive $5,000 for a free bed to be known as the "John Simmons Bed"——In memory of the late Theodore Spencer, vice president and general manager of the Bell Telephone Company, the employés of the company have endowed a free bed in the Pennsylvania Hospital

Philadelphia to Entertain—Intending visitors to the meeting of the American Medical Association at Atlantic City will benefit by many events planned to occur in Philadelphia before and after the Atlantic City meeting Specially arranged series of clinics will be given at all of the teaching institutions, hospitals, etc, on June 3, 7 8 and 12 The dedicatory exercises of the new Jefferson Hospital will be held June 7 The Medical Club of Philadelphia will entertain the retiring and newly elected presidents of the American Medical Association June 7 at a reception at the Bellevue Stratford

Personal—Dr and Mrs Wharton Sinkler sailed for Europe May 11——Dr William S Newcomet has been elected president of the Oncologic Hospital, and Dr Charles W Sheppard was elected assistant physician to the same institution——Dr Charles Nassau has been appointed demonstrator of applied anatomy in Jefferson Medical College, and Dr Hoffmann assistant demonstrator——Dr Albert E Roussel has been honored by the French government with the decoration of the purple ribbon, which confers on the holder the honorary title "Officier de l Academie"——Dr George B McClellan, professor of applied anatomy in Jefferson Medical College, was presented with a silver case by his students, May 8

Bureau of Health Report—The report of the bureau of health for March shows that in the division of medical inspection 3,720 inspections were made, excluding schools, 615 fumigations were ordered, and 63 cases were examined for special diagnosis The medical inspectors made a total of 5 301 visits to the different schools, and of this number 683 children were excluded from school The inspectors collected 371 cultures, made 130 injections of antitoxin and performed 231 vaccinations During the month 2,613 deaths and 2,392 births were reported In the division of milk inspection 7,496 examinations were made, which comprised 159,755 quarts of milk 834 of which were condemned The report of the bacteriologic laboratory of the bureau shows that 1,653 diphtheria cultures and 560 specimens of suspected typhoid blood were examined, 865 bacteriologic examinations of milk and 147 bacteriologic examinations of sputum were made, 6 disinfection tests were performed and 2,700,500 units of antitoxin were distributed throughout the city

Treated the Sick for 156 Years—On May 6 the contributors of the Pennsylvania Hospital held their one hundred and fifty sixth annual meeting The Pennsylvania Hospital was the first hospital established in America, and at a period when there were but few such establishments in England or continental Europe Public opinion had been prepared for it by Benjamin Franklin who had written in his newspaper of its utility and desirability, and whose connection with the assembly enabled him to secure the passage of an appropriation of £2,000 for its foundation, conditioned on the movers securing a like amount The plan for the hospital was drawn in London Franklin was not himself the projector of the hospital It had its origin in the mind of Dr Thomas Bond The annual report of the hospital shows that the number of patients admitted to the receiving wards during the year was 27,660, of whom 4,100 were transferred to the wards The report of the out patient department shows that 10 861 surgical cases were treated, 2,345 medical 2,015 eye, 612 ear 1,216 nose and throat, 424 gynecologic, 47 mental and nervous, 1,388 dermatologic in all 18,908 The total number of visits in the out patient department was 60 631 The total expenses of the hospital for the sick and injured were $152,124 47, or $9,339 01 more than the expenditures of last year

Pathological Society Semi Centennial—The Pathological Society of Philadelphia commemorated the fiftieth anniversary of its founding May 10 and 11 The exhibition meetings began May 9 and continued until May 11 The formal exercises were opened by the president Dr W M Late Coplin, at 10 a m May 10 when the society went into scientific session a report of which will be found in this issue under Society Proceedings, page 1709 At 7 p m a dinner, at which 157 covers were laid, was held in the Clover room of the Bellevue Stratford The following committee had this dinner in charge Drs W M. Late Coplin Allen J Smith Joseph McFarland Warfield T Longcope Courtland Y White, Alfred Stengel David L Edsall David Riesman, J Dutton Steele and Albert P Francine Dr George E de Schweinitz of the University of Pennsylvania was toastmaster and called on the following to answer to the toasts of the evening Dr S Weir Mitchell Philadelphia "The Founders of the Pathological Society," Dr William H Welch Johns Hopkins University "The Pathologic Era in Medicine," Dr J Collins Warren Harvard Medical School "The Surgeon and Pathologist," Dr Simon Flexner Rockefeller Institute, "Experimental Pathology" and Dr Alfred Stengel University of Pennsylvania, "The Pathological Society of Philadelphia" Informal toasts were responded to by Dr Reginald H Fitz Harvard University Dr George Dock University of Michigan Dr Frank Billings University of Chicago Dr Alonzo F Taylor University of California and Dr Abraham Jacobi of New York The guests of the society were Drs Reginald H Fitz president Congress of Physicians and Surgeons professor of medicine of Harvard University J Collins Warren Harvard University Abraham Jacobi New York Simon Flexner Rockefeller Institute George Dock University of Michigan William H Welch Johns Hopkins University Frank Billings University of Chicago Fred C Novy University of Michigan Frank B Mallory Harvard University Alexander Blackader Montreal Canada Woods Hutchinson Redlands Cal James Ewing Cornell University Alonzo F Taylor University of California Philip K Brown University of California Richard M Pearce Albany N Y Milton J Rosenau Marine Hospital Washington D C James R Hunt New York City H M Christian Harvard Medical School Robert B Greenough Boston Herbert C Moffitt University of California J Collins Warren Jr Boston Philip Marvel Atlantic City N J Richard O Reeve Toronto Edmond Souchon Louisiana and Joseph H Pratt Boston

SOUTH DAKOTA.

Personal.—Dr F Arthur Van Buren, Lead, has resigned his position in the Home State Hospital——Dr Clark B Alford, Huron, has retired from practice on account of failing health

Sanitarium Established.—A number of the physicians of the Black Hills have formed an organization for conducting a sanatorium and hospital at Hot Springs A residence with 26 rooms has been leased, which will be converted into a sanatorium and properly equipped

State Board Appointments.—The governor has appointed Dr William H Lane, Miller, a member of the State Board of Health, and Drs Frederick W Freyburg, Mitchell, Joseph M Walsh, Fort Pierre, and Leslie G Hill, Watertown, members of the State Board of Medical Examiners

District Society Meeting—At a meeting of the Fifth Councilor District Medical Society, held at Madison Dr Lars J Hauge, Howard, was elected president, Dr Frederick O Kap, Winfred, vice president, Dr Henry H Freudenfeld, Madison secretary treasurer, and Dr Alonzo E Clough Madison, censor

TENNESSEE

Commencement—At the annual commencement exercises of Chattanooga Medical College, Medical Department Grant University April 29, Hon Henry Clay Evans delivered the address of the evening, Dr G Manning Ellis spoke on behalf of the faculty, and Dr S Holtzclaw delivered the valedictory

Charter Asked For—The Baptist Memorial Sanitarium Association Memphis has applied for a charter The organizers wish to erect a building to cost $250,000, directly east of the College of Physicians and Surgeons, to be used as a hospital building The site for the hospital was donated by the college which has also pledged $25,000 for the equipment and maintenance of the hospital In return the college is to have exclusive clinical facilities at the hospital

VERMONT

Analyses at State Laboratory—The pure food law has caused a great increase in the samples of food milk and liquors sent to the state laboratory at Burlington for analysis More than 1 000 samples were examined during March

Personal.—Dr Edward O Whipple, Danby, is still in active practice although in his eighty seventh year——Dr Clarence F Ball has been appointed health officer of Rutland, vice Dr R. Halford Miner, resigned——Dr Everett F Potter has resigned as selectman of North Pownal——Dr Joseph W Jackson health officer of Barre, has resigned

WASHINGTON

Elections—The Asotin County Medical Association at its annual meeting, held in Clarkston elected the following officers President Dr Lafayette Woodruff, Asotin vice president, Dr Paul W Johnson, Clarkston, secretary, Dr Isaiah U Temple, Clarkston treasurer Dr Stephen D Brazeau Asotin, and censors Dr David H Ransom Clarkston, John S McElvain, Anatone, and Henry C Fulton, Asotin

Hospital Notes—The Sisters of Providence, Seattle are about to erect a new hospital, to cost not less than $300 000——Drs Adelbert J McIntyre, Franklin L Carr and I McDonald are about to build a hospital at Hoquiam to cost $30 000——Old Fort Spokane is to be transformed into a sanitarium for Indian children from the Spokane and Colville reservations as well as the reservations in eastern Washington and northern Idaho——The trustees of the Children's Orthopedic Hospital Seattle, who have already $20 000 in the treasury toward the hospital, have decided to increase the cost of the building to $50,000 A site for the institution has been donated by Samuel L Crawford

WISCONSIN

Smallpox.—Smallpox of mild type is reported to be epidemic at Grand Rapids——The public schools of Royalton which had been closed two weeks ago on account of the prevalence of smallpox were reopened April 18

Personal—Dr W C Winters has been appointed pension examining surgeon at August[illegible] vice Dr Ernest M Adams resigned——Dr Wendell [illegible] elected mayor of La Crosse——Dr John [illegible] elected health officer of Manitowoc [illegible]

Medical College U[illegible] the tees on education [illegible]

measure providing an annual appropriation of $50,000 for the establishment of a college of medicine at the University of Wisconsin, was discussed The president of the university and the chairman of the State Board of Health declared that the University of Wisconsin is the only state university of importance that does not provide adequately for students who desire to study medicine

GENERAL

Honors to Americans—The Russian Surgical Society, at its twenty fifth anniversary meeting in St Petersburg, May 9, elected Dr Nicholas Senn Chicago, and Dr William H Watson Utica, N Y, honorary members

Raise Money for Hospital—The society women of Monterey, Mexico, cleared $8 000 in the fête given April 27 and 28 in the Porfirio Diaz Alameda This sum will be given to support the San Vincente De Paolo Hospital

Grand Island Surgeons Meet—At the annual meeting of the Society of Surgeons of the St Joseph & Grand Island Railway, held in St Joseph, Mo April 18, Dr B Pearne Hatch, Beattie Kan was elected president, Dr George A Birdsall Alexandria, Neb, vice president, and Dr Luther A Todd St Joseph Mo secretary treasurer The next meeting will be held in St Joseph in June, 1908

Hospital Car—The Erie Railroad Company has put in service a hospital car to be used primarily for employés of the railroad in case of accident, and also as an adjunct to the equipment of wrecking trains The car is 40 feet long, fitted with six wheel trucks, made almost entirely of steel, with a ward room accommodating 11 patients and furnished with lavatory and toilet It also has an operating room thoroughly equipped

Warning Concerning Magazine Solicitor—A Boston correspondent states that a number of physicians in his vicinity have been victimized by a proposition to supply the London *Graphic* for their reception rooms for the cost of the postage viz. $1 04 When none of the copies were forthcoming our correspondent wrote to the alleged headquarters in New York City (International Foreign News Co, Washington Square) but his letter was returned to him undelivered

Navy Medical Bulletin—The Navy Department has begun the publication of a quarterly, known as the *United States Naval Medical Bulletin* issued for the information of the naval department of the service It is limited to professional matters as observed by medical officers at shore stations and on board ship in every part of the world, and principally to the physical welfare of the navy personnel The first issue appeared in April and contains special articles on "The Gross Pathology of Samoa, with Comments on Sanitary Features and Treatment" by P A Surgeon A M Fauntleroy, "A Preliminary Note on Flagellates," and a report of a case of "Tropical Febrile Splenomegaly," by Assistant Surgeon H W Smith also clinical notes and comments on medical progress and current events

Smallpox in the Philippines—Dr V C Heiser, chief quarantine officer reports that a few sporadic cases of smallpox continue to occur in Manila An investigation of the cases usually shows that the infection was contracted in one of the provinces in which the population has not yet been completely vaccinated The crew and passengers detained in quarantine at the Marivelès quarantine station, on account of a patient with smallpox, who was removed from the steamer *Ban Yek* on which they were traveling were held for 14 days, being released Feb 22 1907 As a precautionary measure all the troops were vaccinated as well as all persons in the immediate vicinity of the place in which the troops were stationed So far no case which could be diagnosed as true smallpox has made its appearance

Special Quarantine Regulations for Fruit Vessels—As a concession to vessels engaged in the fruit trade provision has been made in the quarantine regulations according to the reports of the U S Public Health Service, to obviate the injurious detention of perishable cargoes in the southern ports While these regulations are stringent they do not impose an embargo on the fruit traffic The success of the new regulations is dependent on the reliability of the information as to health conditions at the various ports from which the vessels come The government therefore reserves the right when dissatisfied with the information furnished, to recall from such a port the medical officer there detailed In such a case the special certificates required could not be issued and the vessel on arrival would have to be subject to the general quarantine regulations

Health of the Isthmus for March—Col W C Gorgas, chief sanitary officer, reports that the general health of the Isthmus was excellent during March The number of men constantly sick among the employés has decreased steadily since August, 1906, the rate for March being 19 40 This, says Gorgas, is as low as they can ever hope to get it Among the 4,600 American whites there were only two deaths Among the American women and children living in commission quarters there were no deaths and very little sickness of any kind Pneumonia was the disease which caused the greatest mortality, during the month it caused 53 deaths, all among the negro employés The negroes showed the highest mortality and the American whites the smallest No case of yellow fever has occurred in the Isthmus since May, 1906 There were no quarantinable diseases during March

Academy of Medicine Election.—The Academy of Medicine, formed at Springfield, Mass, with over 200 charter members from western Massachusetts, Vermont and New Hampshire, which we mentioned on page 428, Feb 2, 1907, has elected the following officers Dr Walter A Smith, Springfield, president, Drs John A Houston, Northampton, and Ralph H Seelye, Springfield vice presidents, Dr Joel I Butler Springfield secretary, Dr Harvey W Van Allen Springfield treasurer, Drs Oscar W Roberts, Springfield, Oliver W Cobb, Frederick W Chapin, Springfield Edgard H Guild, Springfield, and Walter R. Weiser, Springfield, board of directors, and Drs Theodore S Bacon, Springfield James B Atwater, Westfield, Louis H Clark Holyoke, and Frederick B Sweet, Springfield, censors The Academy expects to establish a graduate course in medicine and to furnish a home for medical clubs and societies

Seeking National Health Department—The committee of one hundred appointed by the American Association for the Advancement of Science to further the establishment of a national department of health met at New York City, April 18 and organized by the adoption of rules, the election of officers, and the appointment of an executive committee Prof Irving Fisher New Haven presided as the temporary chairman and was subsequently elected president Ten vice presidents were elected as follows President, Charles N Eliot, Harvard University Felix Adler, New York, Dr William H Welch, Baltimore Rev Lyman Abbott, New York, President James B Angell University of Michigan, Miss Jane Addams Chicago, Hon Joseph H Choate, New York, Rt Rev John Ireland St Paul Hon Ben B Lindsey, Denver, Hon John D Long, Boston Mr Champe S Andrews was elected secretary Prof Irving Fisher Dr Thomas Darlington Prof J P Norton, Dr John S Fulton, Dr Richard C Newton, Prof F F Westbrook and Champe S Andrews were elected executive committee to further the establishment of a national department of health The committee on publicity is to spread information through the public press and otherwise At a meeting of the executive committee Dr Charles A L Reed told of the work done by the American Medical Association in advocacy of a national department of health He urged that a department not a bureau, should be sought The Council on Medical Legislation of the American Medical Association is in communication with a physician in each county in the United States, who is laboring in the interest of this work and has an index of the men in each county who are active in politics As secretary of this council he offered these resources to the executive committee The official office of the secretary of the committee of one hundred was established in the office of the Public Health Defense League at 105 East Twenty second Street, New York

CANADA

Hospital News—The new hospital at Saskatoon Sask is to be conducted by the Grey nuns——Much success is attending the endeavor to establish in various hospitals in Canada memorial cots to the memory of the late Lady Grenfell, daughter of Governor General and Lady Grey

New Medical Laboratory for Queen's University—Lieut Gov Mortimer Clark of the province of Ontario, will lay the corner stone of the new medical laboratory of Queen's University, Kingston Ont April 28 The Ontario government contributed $50,000 toward the erection of this new medical building

FOREIGN

Smallpox in China—Acting Assistant Surgeon Ransom reports that smallpox is prevalent in Shanghai Nanking and Tientsin The figures obtainable, he states, can only be taken as an index of the prevalence of the disease and represent but a small percentage of the number actually suffering from smallpox

Joint Meetings of Medical and Legal Societies—At a number of places in Germany, physicians have taken the initiative and summoned a joint conference of lawyers and physicians to discuss various questions of forensic medicine, especially criminal psychology Arrangements are being made to hold these joint conferences quarterly, as they are proving extremely instructive and valuable

Gratitude for Private Instruction.—A Bienfait of Liege, Belgium, found time outside of his duties as general practitioner, neurologist and secretary of the *Gaz Méd Belge*, to deliver a course of lectures on the pathology of the nervous system The thirty or more physicians who attended the lectures descended on his house one evening and presented him with an up to date Roentgen equipment as a token of their appreciation of his kindness

Bequest for Convalescent Home—The great benefits of a home for patients during convalescence are appreciated by physicians more than any one else, and several physicians have left money for that purpose in their wills in the last few years in various countries The latest is Dr Buhl of Heidelberg, whose will bequeaths his property to the university of Heidelberg, subject to a life pension for his wife After her death, about $75,000 becomes available for the construction of the home and about $50,000 for its maintenance

International Anti Alcohol Congress—The last anti alcohol congress was held at Budapest in 1905 The next will convene at Stockholm, July 28 to Aug 3, 1907, the eleventh international gathering, to discuss the evils of alcohol Communications for the congress are to be sent to Prof C Wallis, Tegnergatan 2, Stockholm The crown prince will preside, and a large number of communications have already been received, including those on "Alcohol and Responsibility," "The Burdens Imposed on the Community by Alcohol," "Alcohol in the Rural Districts," "Alcohol in Lapland," etc

Organization of the Profession in Bohemia.—THE JOURNAL has already referred to the recent organization in German Bohemia of a society with the same aims and purposes as the German *Leipziger Verband* It is doing good work and has accomplished valuable results already in its brief span of existence. A national election is impending, and the society has issued a circular which has been sent to every physician in the country acquainting him with matters of importance to the profession depending on his vote and influence By this concerted action it is hoped that legislation promoting public health and the welfare of the profession can be secured.

Glasgow Maternity Hospital.—Like almost every other hospital in Glasgow, Scotland, the Maternity Hospital is appealing to the public for funds to complete the additional buildings in course of erection This hospital was originally started in 1834 and the present building was erected in 1840 For a number of years both patients and students have been crowded According to the *Lancet*, the directors believe that the buildings now being constructed will enable them to meet the pressure on their present inadequate accommodation for patients and at the same time to provide a school thoroughly equipped for the teaching of practical obstetrics and gynecology Toward the cost of the new buildings and equipment $200,000 has been subscribed and $175,000 more is required

Surgical Congress of the Northland.—The Nordisk Kirurgisk Forening will hold its annual congress at Christiania Aug 7 10 1907 The subjects appointed for discussion are "Resection of the Large Intestine," "Indications, Technic and Results of Prostatectomy," and "Treatment of Inflammatory Affections of the Adnexa" Bloch and Borelius will open the discussion on the first topic, and A Gunderson of La Crosse, Wis will deliver the address on the second subject, while the third will be introduced by Engstrom and Kaarsberg Further particulars can be learned from the president, K Jervell Christiania or the secretary, Dr Tscherning Copenhagen Borchgrevink announces a communication on the subject of "Ambulant Extension Treatment of Fractures of the Upper Extremities"

Consultations for Infants in Every French Town—The French minister of the interior has notified all the prefects throughout France that they must organize a "mothers' dispensary" or consultation for infants, similar to the one founded by Budin in Paris which has been frequently mentioned in these columns Budin devoted much time and energy to the extension of the system of "nursing consultations" and the sickness and death rate among infants was materially reduced wherever they are introduced Since his recent death testimony in this line has been accumulating more and more until now the French authorities have decreed the universal adoption of the system Budin actually gave his life for the cause as he died of pneumonia contracted on a trip to a neighboring city to lecture on the subject

The Cocain Evil in Calcutta—The Indian correspondent of the *Lancet* states that the cocain habit has obtained a great hold on the lower classes in India The *Lancet's* correspondent states that this is the more remarkable, as but a small part of the population drinks tea or coffee In 1900 the sale of cocain was limited to medicinal purposes, and only certain persons were granted licenses to sell it In 1902 the possession of more than 60 grains was made illegal Notwithstanding the strict rules against importation the drug is said to find its way into the country from Germany through unscrupulous dealers in the native states and in the little strips of foreign territory which remain in India It is said that the principal trade is through Delhi The profit is large and the cocain is never sold pure, being mixed with phenacetin or other drugs

Bier Succeeds von Bergmann in Chair of Surgery at Berlin—A cable dispatch states that August Bier has been appointed professor of surgery in the University of Berlin, to succeed the late von Bergmann It has been known for some weeks that the choice wavered between Bier and von Eiselsberg of Vienna The latter was called to Berlin some years ago, but declined, as his mother was a loyal Viennese, and he did not wish to leave her and she would not leave Vienna She has since died THE JOURNAL published April 28, 1906, page 1299, a portrait of Bier and a brief sketch of his career The cable dispatch adds that Bier's summary dismissal of von Bergmann's assistants as his first official action has aroused much unfavorable comment He is only 46 at present, but has occupied in turn the university chairs of surgery at Kiel, Greifswald and Bonn

Physicians Win in Long Conflict at Gera—One of the first cases in which the German *Leipziger Verband* was called on for its services after it was organized was at Gera The medical officers of a certain sickness insurance society protested against the addition to the medical force of a non qualified "nature healer," directly contrary to their contract with the society As the superintendent of the society paid no attention to their protests the physicians resigned, and the *Leipziger Verband* championed their cause. The society held back half of the last quarter's payments due the medical officers, and the latter sued for the amount due them The case after four years has finally been decided in favor of the physicians The judge stated that the society had acted contrary to its contract—not the medical officers—and ordered the society to pay the amount still due the physicians, with interest to date, and also imposed the costs of the suit on the society

International Congress on Stomatology—An international congress of stomatology has been organized to meet at Paris Aug 6 and 7, 1907 The executive committee includes prominent dentists from various countries and an exhibition of appliances and objects of historical and educational interest will be held in connection The official language of the congress is French but English and German will also be admitted if the article presented is followed by a brief summary in French It is stated also that Esperanto will be allowed in the discussions The international congress is to be preceded by a national French Congress of Stomatology, arranged in honor of the twentieth anniversary of the French Société de Stomatologie The chief aim of this national congress it is said is to demonstrate and emphasize that a general medical education is indispensable for the practice of stomatology, as well as for laryngology and ophthalmology Stomatology is as much a medical and surgical specialty as these other branches of medicine Further details can be obtained from the secretary M Chompret 182 Rue de Rivoli Paris or from Dr Eugene S Talbot 103 State Street Chicago

Alliance for Social Hygiene—The Alianza de Higiene Social is a newly organized society in the Argentine Republic whose aim is to coordinate and promote all efforts in favor of public health and hygiene The official program includes measures to combat "averia" (the newly coined Spanish term for venereal disease similar to the French "avarie") tuberculosis alcoholism malaria and infantile mortality to promote the care of child life in every way to improve the dwelling places and food of the poor to promote physical training and to organize centers for the education and protection of the public with exhibitions and permanent museums of everything relating to puericulture hygiene etc The society also intends to use its influence for the adoption of compulsory insurance against sickness accidents and old age F P Coni is the leading spirit in the movement and is making every effort that the society may be able to present a fine showing of tangible results when the world is invited to help the republic celebrate in 1910 the anniversary of the independence of Argentina The *Semana Medica* for March 21 contains his address on the

subject presented at the Third Latin American Medical Congress recently held at Montevideo Coni was the president of the second congress

A Representative Board of Health.—The national board of health for the grand duchy of Baden has recently been enlarged to make it more representative It has hitherto consisted of representatives of the medical faculties of the two universities, the president of the national medical society and several members appointed by the national authorities The additional members now to be added are representatives from the departments in charge of the water supply and roads, the presidents of the university institutes of hygiene and the technical college at Carlsruhe, three members instead of one to be appointed as representatives of the medical profession, and one each from the dental, veterinarian and apothecaries' national associations Besides these the organized employers of labor and also the wage earners are to have each a representative The members are elected for a four year term and serve without remuneration, except that mileage and $3 a day are allowed to those who do not live in the city where the meetings are held The *Deutsche med Wochschr* adds to the above that the minister of the interior is *ex officio* president of the board, and he can invite expert talent from outside at any time to discuss questions that may arise

Antiquackery Legislation Adopted in Germany—The German authorities are on the point of adopting a decree applying throughout the empire certain regulations requiring that all persons—not registered physicians—who make a practice of treating the sick, must notify the police authorities when they locate in a place, and must give information in regard to their "practice," and must keep a set of books They are forbidden to use "distant treatment," to treat contagious diseases, especially venereal diseases, and to use narcotics, hypnosis, suggestion, etc. The right to practice can be refused to persons who have previously been convicted of misdemeanors or crimes, or have been deprived of their civil rights for any cause The right to practice can also be withdrawn at any time for the same reasons or for injury from their practices Penalties up to $375 and imprisonment can be enforced Our German exchanges state that it is a pity that the regulations do not entirely forbid the treating of the sick by unqualified persons, but even as proposed, they represent great progress in the antiquackery movement The question of "secret medicines" is next to be taken up, and a bill similar to the regulations in force in Austria is now being discussed which prohibits public advertising of such remedies and the importation of certain "secret remedies"

Cancroin Suit Decided—THE JOURNAL mentioned at the time the suit brought against the firm of E Merck by A. Adamkiewicz, formerly professor at Cracow, inventor of cancroin, a remedy for cancer He signed a contract with the Merck firm for the production, advertising and sale of the remedy, the contract to run for twenty five years, with the proviso that if the firm lost money by the deal they could withdraw from the contract at the end of five years This they did in 1896, when Adamkiewicz at once brought suit for $60,000 damages, the penalty for non fulfillment of contract, claiming that the firm had not fulfilled its contract, as it had failed to advertise and push the remedy in such a way as to bring it duly before the public The Merck firm stated that it had lost money on the contract and that it had been deceived in respect to the curative value of the remedy Professors von Eiselsberg and von Neusser testified that cancroin is merely a preparation of neurin, and that the after history of cases published by Adamkiewicz as "cures of cancer" showed that the remedy had not materially retarded the fatal progress of the disease It was first put out as a secret remedy, and Adamkiewicz's methods of procedure led to his being dropped from the rolls of the Vienna Medical Society The judge promptly decided in favor of Merck.

Congress of German Orthopedic Society—The sixth annual meeting of this society was held at Berlin April 2, with Bardenheuer in the chair The remote results of plastic operations on the tendons was one of the topics presented by various speakers Hoffa exhibited a number of patients to show the fine results when the operation on the tendons was preceded by careful and prolonged correction or over correction of the deformities He prefers total to partial transplantation of the tendon and thinks that suture of the tendon to the periosteum gives sometimes a firmer hold and better results than suture of tendon to tendon In the after treatment a plaster cast must be worn for at least 6 weeks and then a splint, with massage and active gymnastics If there is enough reliable muscular tissue on hand, permanently good results may be counted on Schanz reported that plastic tendon operations on the quadriceps had given him exceptionally fine results Vulpius stated that he had had better results from transplantation of tendon on tendon Lorenz emphasized the necessity for prolonged preliminary treatment with overcorrection This will show the muscles best adapted for transplantation In quadriceps paralysis he has found that osteoclasis of the femur helped very much in overcoming the functional obstacle Fat embolism after bloodless operations was discussed also Some of the speakers warned against attempting to accomplish too much at a single sitting It is much better to proceed gradually Under the age of 14 the danger of fat embolism is comparatively slight, as the bone marrow contains very little fat Vulpius, however, stated that he had had 2 fatal cases in children under 10 Lorenz remarked that the previous use of a wheeled chair, by inducing extreme atrophy of the bones, causes a predisposition to fat embolism and other complications Bardenheuer expatiated on the benefits of extension and early active movements to prevent ankylosis of the adjacent joints in case of fracture of a long bone

German Congress for Internal Medicine—The twenty fifth German Congress for Internal Medicine met at Wiesbaden, April 15, and the silver jubilee was celebrated by the election of 15 honorary members and by an inaugural address from E von Leyden, the founder of the Society for Internal Medicine and of the congresses The first subject discussed was "Neuralgia and Its Treatment" Schultze referred to arteriosclerosis as an occasional source of severe neuralgia, and stated that in sixteen cases of rebellious neuralgia of the first branch of the trigeminal nerve he had found the frontal sinus diseased in six instances He also mentioned that brachial neuralgia is sometimes observed in the initial stage of paralysis agitans Physical measures, he said, are more effectual than drugs, although aconitin has sometimes given good results In some cases massage does wonders, in others electricity, in others application of heat, and Bier's hot air massage Bier has reported the cure by hot air massage of twelve out of twenty patients who had entered the hospital for operative treatment of neuralgia The hot air massage was described recently in THE JOURNAL on page 653 In some cases Schultze has cured rebellious neuralgia with hot sand baths, Scottish douches, etc He has abandoned operative stretching of the nerve, but finds orthopedic stretching sometimes useful Schlösser reported the present status of the treatment of neuralgia by local injection of 70 or 80 per cent. alcohol This induces degeneration of the nerve, and the segment involved is absorbed, although the neurilemma remains intact, the effect being a medicinal resection of the nerve Later it regenerates from the periphery toward the center He has thus operated on 202 patients with chronic neuralgia, injecting from 1 to 4 c c. of alcohol In case of sensory nerves he injects from 2 to 4 c c of alcohol at different points, trying to destroy the nerve over as large an extent as possible With motor nerves the aim is to induce paresis, and small amounts are injected through the cannula left in place, repeating every five minutes until there is paresis In 38 cases of sciatica recurrence was observed in 2 patients after 3 or 6 months, the others have been cured to date, permanent cure has resulted in 16 cases of occipital, 8 brachial, 1 intercostal and in 2 of lancinating neuralgia in patients with ataxia In the 11 cases of facial clonus recurrence followed in 9, but 7 of the patients proved to be hysterics and treatment had been suspended as soon as the hysteria was diagnosed In 123 cases of trigeminal neuralgia—bilateral in 2—the average duration of the cure has been a little over 10 months He advocates this "chemical resection" of the nerve as worthy of trial before resorting to such a serious operation as removal of the Gasserian ganglion (Previous communications on the subject were mentioned in THE JOURNAL, page 1243, of vol xlvi 1906) Lange reported good results from his method of injecting from 50 to 150 c.c of physiologic salt solution in treatment of sciatica Patients thus treated should remain in bed for a time Improvement follows the first injection, and the cure is sometimes complete by the end of the third day Quincke confirmed his statements and added that experiments on the cadaver had shown that the injections act only on the sheath and not on the nerve, so the technic is simple and easy Alexander prefers injection of 10 c c of Schleich solution, he ascribes the pain to a combination of neuralgia and a myopathy, the muscular affection being generally overlooked Krause reported the removal of the Gasserian ganglion in 56 cases and stated that 48 of the patients are alive and free from recurrence to date, but 8

died during or in consequence of the operation He has never observed regeneration of the nerve after this operation. Brieger stated that physical measures cure in about 80 per cent Absolute repose should be enforced in the acute cases, in the chronic forms a course of baths and dietetic measures are useful Hanau reported great benefit from dry cupping in acute sciatica, and Minkowski from spinal anesthesia Large doses of methylene blue proved successful in curing infectious neuralgia in von Noorden's experience, especially after influenza Freupel has found repeated cocainization of the nasal mucosa of great benefit in cases of trigeminal neuralgia, even when the accessory cavities seemed to be entirely sound Gara asserted that unless the lowest lumbar vertebra is sensitive to pressure there can be no sciatica, as he has found this sign constant in genuine sciatica Bäumler called attention to the neuralgia due to venous stasis, cured by improving the heart action with digitalis or other heart tonic. His has had occasion to observe neuralgia evidently due to a family tendency, and best combated by dietetic measures "Edema in Nephritis" was the second subject discussed, and von Noorden emphasized the necessity for discriminating in treating nephritic patients by suppressing salt chlorids in the diet He had witnessed cases in which reduction of albumin and chlorids in the diet induced great debility while, on return to an ordinary diet, the patients rapidly regained their previous strength Naegeli of Zurich stated that later experience has confirmed his previous assertions in regard to the prevalence of tuberculous lesions He found tuberculous lesions in 97 per cent of 1,000 cadavers, as reported in 1900, and this same proportion has been maintained through all his subsequent investigations and for all classes of society Honigmann related that at the convalescent home for Russian officers at Wiesbaden 20 patients with serious traumatic hysteria have been under treatment and 23 others with severe neurasthenia He commented on the fact that there is no record of such traumatic neuroses among the officers after the wars of 1866 and 1870 The above summary is culled from the nearly 6 page report of the congress in the *Semaine Medicale* April 24—the first journal to appear with an account of the proceedings

LONDON LETTER.

(From our Regular Correspondent)

London, April 20, 1907

Enlargement of the Library of the College of Surgeons

The library of the Royal College of Surgeons, which is the largest medical library in Great Britain and the largest in Europe, with the exception of the library in Paris, has outgrown the space allotted to it It now contains 100,000 publications, made up of 60,000 volumes and 40,000 pamphlets It increases at the rate of 1,000 volumes a year A large room has been added over the library, which in former years consisted of a suite of apartments occupied by a clerk who lived in the college, a custom no longer followed This room will be principally devoted to works on public health and official government reports Thus space has been obtained for another 10,000 volumes

The Jacksonian Prize

The Jacksonian prize of the college for 1906 on "The Diagnosis and Treatment of Those Diseases and Morbid Growths of the Vertebral Column, Spinal Cord and Canal, Which Are Amenable to Surgical Operations," has been awarded to Mr Donald Armour, F.R.C.S The following subject has been chosen for 1908, "The Pathology and Treatment of Those Conditions of the Colon Which Are Relievable by Operative Measures" The subject for the next triennial prize is "The Histologic Anatomy of the Lymphatic and Hemo lymphatic Glands More Especially with Reference to the Changes Which These Glands Undergo in Acute Infective Processes" Prof William Wright will deliver three Hunterian lectures on "The Prehistoric and Early Historic Inhabitants of England," on May 6, 8 and 10

Effective Organized Effort.

The method adopted largely at the instance of the British Medical Association of preventing poor law authorities friendly societies and others who contract for medical services obtaining them at rates deemed inadequate is to form combinations of medical men in the various districts who decide that no one shall apply for an appointment of this kind which happens to be vacant Warning notices are inserted in the medical journals asking physicians who being strangers may know nothing of the battle waged with these contracting bodies to communicate with the secretary of these local medical society before applying for the post Sometimes, however, a physician declines to fall in with the combination and takes a proscribed appointment In the language of the trades unions, he is a "blackleg" His position with regard to his medical brethren is then far from enviable, and he may be treated with all the rigor which trades unions adopt toward non union workers In a country district the guardians, who recently appointed Dr Charlton to the post of medical officer of the workhouse, received a letter from the physicians of the district, who refused to apply for the appointment, as they considered the salary inadequate, stating that they refused absolutely to recognize Dr Charlton professionally or in any way whatever, either by acting as his deputy or in cooperation with him over any patient If in any case of emergency additional medical aid should be required by the guardians, the local physicians will not refuse to attend, provided the entire control of the case is for the time being placed in their hands independently of Dr Charlton In such cases they will charge such fees as they consider reasonable and adequate The guardians decided to take no action in the matter, the chairman observing "Of course, if the doctors refuse to recognize Dr Charlton, that is a matter of no concern whatever to us"

The Milk Supply

Public opinion and the government appear at last to be awakening to the perils of the milk supply A committee of the National League for Physical Education has been formed by Sir Lauder Brunton This committee has now formed a joint committee with the National Health Society, the Infants' Health Society, and the Liverpool Infants' Life Preservation Committee The chairman is Sir Frederick Treves The committee is composed of men chosen from among the experts on milk, including health officers The object is to secure a universal supply of milk, pure, fresh from the cow and free from disease germs—"clean milk." An annual system of licenses to dairymen renewable only if their premises are kept in sanitary condition, is recommended The corporations of the great cities such as Manchester, Liverpool and Sheffield, have already obtained special parliamentary powers to enable them to exclude from their districts the milk of cows suffering from tuberculous udders Such milk can be sold elsewhere It is proposed that such powers should be extended to the whole country

VIENNA LETTER.

(From our Regular Correspondent)

Vienna, April 24, 1907

Distant Treatment by Letter or Telephone

The Vienna "Aerztekammer" (Medical Council) in one of its recent meetings discussed the question of treating patients without seeing them It has been brought to the knowledge of the council that in several instances physicians, not quacks have been asked by patients residing at a distance in the country for professional aid and these doctors had thought fit to prescribe for diseases, the symptoms of which they could not possibly have found out except by regular examination The council is of the opinion that such a way of treating is not to be approved of since the art of the physician is founded on the consideration of the patient as an individual and the treating of symptoms instead of the disease will not add to the dignity of the profession In a similar way, consultations by telephone, unless the patient be known to the doctor, should be discarded The council has sent a circular to all members of the profession in Vienna informing them of the resolutions voted and it proposes to deal summarily with all members complained of in the future by fining them about $100

Scarcity of Hospital Beds

The enormous increase of infectious diseases in Vienna especially of influenza measles and scarlatina during the last few weeks has swamped the hospitals The number of beds is usually sufficient for ordinary needs but hundreds of patients were seeking admission to the hospitals and had to be turned away This condition of affairs was not allowed to last more than five days by the public and the press The municipality finally consented to open "emergency hospitals" especially for scarlet fever and diphtheria while non infectious patients are tended at their homes by municipal doctors and nurses This system has been in existence only a short time It is called "Distriktkrankenpflege" and the expense hitherto has been borne by the municipality In spite of the two new pediatric hospitals erected quite recently by private donations (the two buildings together can accommodate only 200 children) the scarcity of hospital bed[illegible] an undeniable fact There are for 1[illegible] 42 [illegible]ilable for nursling[illegible] with a yearly b[illegible] 70 [illegible]se con[illegible] at last appealed [illegible]ublic

Pharmacology

TYREE'S ANTISEPTIC POWDER

Discrepancies Between Facts and Claims—Unfortunate Attempts of Mr Tyree at Explanation

A report from the Council on Pharmacy and Chemistry on Tyree's Antiseptic Powder appeared in THE JOURNAL, Oct 20, 1906 This showed that the preparation, advertised as a "scientific combination of borate of sodium, alumen, carbolic acid, glycerin and the crystallized principles of thyme, eucalyptus, gaultheria and mentha, in the form of a powder," was essentially a mixture of boric acid and sulphate of zinc—approximately four fifths of the former to one fifth of the latter "The carbolic acid, thyme, eucalyptus, wintergreen, etc, if present, are present only in sufficient amount to give the compound a satisfactory odor" As will be remembered, in the correspondence published at that time, Mr Tyree attempted to explain the discrepancies between his statements and the proven facts by intimating that he had recently changed the formula, and that it was his intention "on or about the first of February to state to the medical profession his reasons for changing the formula," and that the change had been made "a short time ago," at the suggestion of several prominent gentlemen" Since that time, through circulars and other advertisements, Mr Tyree has attempted to explain the matter in various ways In his latest circular letter he seems to make a deliberate attempt to mislead our profession and to misrepresent facts to a degree that makes it almost impossible to believe that the circular came from a man who claims to be honorable

First, however, we shall take this opportunity to publish some matter which we have had in reserve since the first exposé was made last October When it was realized that Mr Tyree intended to defend himself by claiming that a change had recently been made in the powder, we took occasion to try to secure some of the preparation that had been on the market for a long time In this we succeeded very well From a Chicago druggist one package was bought which had been in the store at least since July, 1902—how much longer is not known The druggist from whom the powder was obtained bought the drug store in July, 1902, and this powder was on hand at that time, none having been bought since This particular powder was analyzed by a chemist, who found the composition practically the same as that given in the Council's report, this chemist estimating that it contained approximately 81 per cent boric acid and 14 per cent anhydrous zinc sulphate Bearing in mind that for at least four years and ten months Tyree's Powder has been essentially the same as it is to day, this letter is very interesting (The comments in brackets are, of course, ours)

"J S TYREE,
"CHEMIST,
"WASHINGTON, D C

"April 16, 1907

'Dr ——— ———,

"*My Dear Sir* —Doctors and medical publications of extreme and prejudicial minds often hold and express opinions in honorable faith, but like all critics, they are not always familiar with the conditions composing their opinions, and are often given to expressing them without complete knowledge of the true motives and facts in the case

"If you will read an article that apppeared in one of the medical weeklies some time ago [THE JOURNAL of the American Medical Association of course] and which has been copied by several of its offsprings [not many, we regret to say] relating to Tyree's Antiseptic Powder you will see that I had previously informed the editor as well as his council of investigators that at the suggestion of prominent physicians extensive clinical experimenting [sic] were being made with some slight [! ! !] change in my powder the object being to develop and extend its usefulness in new lines [It had already been recommended for about everything[1]] and at the same time make it more acceptable to the general run of the profession I also notified this editor that these investigations would not be completed until the first of the present year, after which time these slight [! ! !] changes in the formula of Tyree's Powder would be announced [It is now the middle of May, when and where were the changes announced?[2]]

"There is nothing new, startling or dangerous in such changes in formulas The Pharmacopeias and national books of authority are continuously improving their formulas It is the same with every preparation on the market [Mr Tyree, as a nostrum maker, is in a position to know His plea evidently is "I am no worse than others"] The apparent difficulty in my case is caused by my exceptional frankness ["exceptional frankness" is good under the circumstances] with the profession in telling them [when and where?] about this improvement before I was ready to announce full details and particulars, or place my improved [sic] powder on the market Yours very truly,

"J S TYREE"

For years Mr Tyree has been misleading physicians by making false statements regarding the composition of his powder, and regarding its value as a therapeutic agent When exposed he tries to defend himself and his business by statements and excuses that are worthy of a schoolboy trying to get out of a bad scrape We would respectfully suggest to him that he either take his wonderful powder off the market, or—which probably would amount to the same thing—tell the truth, and the whole truth, about it

1 From the circular accompanying a package bought over a year ago we find the powder recommended for the following conditions For Leucorrhea Gonorrhea Vaginitis Pruritus Ulcerated conditions of the mucous membrane Scrofulous Syphilitic and Varicose Ulcers for Spraying the Nose and Throat for immediate deodorizing and disinfecting for prickly heat, poison oak squamous eczema and other conditions of similar nature As a deodorant and prophylactic in dental work for disinfecting offensive cavities. for profuse and offensive perspiration swelling soreness and burning of the body and feet As a delightful toilet preparation after the bath and shaving

2 Last January the national Food and Drugs Act went into effect one of its provisions is that the label must not lie This is not the exact verbiage but it means the same thing So instead of repeating the old false statements the new label of Tyree's antiseptic powder contains nothing whatever about the composition the law does not require that it should—unless the preparation contains certain specified drugs Why is the formula omitted?

Tennessee Pure Food Law a Model.

The Tennessee Legislature has adopted the pure food bill introduced by Dr W B Marr and known as House Bill 141 The bill as adopted is an admirable one and can not but accomplish much good in the state It is worthy of note by members of the profession interested in pure food bills in other states A professional lobbyist, whose presence has been noted in other state capitals at the time that similar legislation was being considered, "happened" to drop into Nashville at the time that the bill was before the legislature He announced that he was a philanthropist, and that his mission in life was to harmonize the medical profession and the various drug interests "He had the effrontery," says our correspondent, "to ask for an interview with some of the leading physicians of Nashville and to announce that he would address a joint meeting of physicians and druggists" It appears that his efforts were mainly devoted to lobbying against the bill by attempting to bring personal influence to bear on various members of the legislature Efforts to coerce the local druggists were also futile Evidently not enjoying the atmosphere of Nashville, the genial philanthropist left before the bill came to a vote He has doubtless "happened" to go to other state capitals, where pure drug bills are pending

Regarding the bill itself

Section 1 provides that it shall be unlawful to manufacture sell or give away any article of food or drugs which is adulterated or misbranded

Section 2 defines drugs to include all medicines and preparations recognized by the United States Pharmacopeia or National Formulary for internal or external use, and any substance or mixture of substances intended to be used for the cure mitigation or prevention of disease in either man or animals Food is so defined as to include all articles used for food drink confectionery or condiment either mixture or compound

Section 3 defines adulterations in a drug as any deviation from the standard of the United States Pharmacopeia or National Formulary or deviation from the professed standard and quality under which it is sold Such adulterations are specified as follows

The presence of any ingredient deleterious or detrimental to health

The presence of any substance which would reduce lower or injuriously affect the quality or strength of the article

The substitution in any manner either in whole or in part of any other substance for the substance claimed.

The substitution of any valuable constituent in whole or in part or the addition of any matter whereby damage or inferiority is concealed or the addition of any poisonous or deleterious ingredient which may render it injurious to health or the presence of any filthy, decomposed or putrid animal or vegetable substance or any portion of an animal unfit for use or of any product of a diseased animal or one that has died otherwise than by slaughter

Section 4 takes up the question of misbranding which is specified to be

1 Offering for sale any article under the name of another article

2 Removing the original contents of a package in whole or in part and placing other matters therein or failing to state on the label the quantity or proportion of alcohol, morphin opium cocain heroin alpha or beta eucain chloroform cannabis indica chloral hydrate, or acetanilid, or any derivative or preparation of any such substance This provision does not apply to prescriptions of regularly licensed physicians dentists and veterinary surgeons when filled for the individuals for whom written nor to such drugs as are regularly recognized in the United States Pharmacopeia and sold under the brand by which they are recognized

3 Misbranding in the case of food is defined as the imitation or offering for sale of an article under the distinct name of another article the labeling or branding so as to deceive or mislead the purchaser or purporting that the article is a foreign product when it is not or where the contents as originally put up have been removed in whole or in part and other materials placed in such package or the failure to place on the package a label stating the proportion and quantity of any of the above named drugs Contents must be stated on the outside of the package The label must bear no statement design or device which is false or misleading in any particular Preparations marked compound imitation or 'blend may be sold providing the fact is stated on the label A guarantee provision for the protection of the retail dealer similar to the section found in the national Food and Drugs Act is found in Section 5

Section 6 defines the scope of the act and Section 7 provides for the appointment of a chemist of established reputation and ability who shall be the pure food and drug inspector and who shall establish an office and laboratory in Nashville

It is noteworthy that this bill contains no exemption clause, such as the druggists in many states are endeavoring to introduce into a bill which is otherwise not objectionable The exemption clause, however practically nullifies the bill

Members of the profession in Tennessee are to be congratulated on the fight which they have made and the victory which they have won The Tennessee bill is one of the strongest and most praiseworthy which has yet been adopted by any state

A Wide-Awake Medical Magazine Comments on Labordine

The report published in THE JOURNAL March 30 by the Council on Pharmacy and Chemistry on Labordine was republished in full in the May *Medical World* Editor Taylor added the following trenchant comment

"The profession should appreciate the above important service rendered by the national organization the American Medical Association We have not advertised labordine' this year, and we will never admit it to our columns again As soon as the Council on Pharmacy and Chemistry published its report on the other acetanilid mixtures (antikamnia bromo seltzer, etc) *The World* immediately republished the same and it was the only journal besides THE JOURNAL of the American Medical Association which did so for a long time as most of the other journals, including many of the state society journals, carried the antikamnia advertisement About a year after the report appeared most of the state society journals, under pressure, were induced to publish it Let us see what journals, including state society journals will suppress this report, for the sake of advertising patronage present or hoped for It is strange how a fraud like this could exist for so long by means of the patronage of a learned profession and not be found out It is the legitimate field of a national medical organization to make investigations like the above It is a duty which belongs to a public organization of national scope rather than to private initiative"

Death from Taylor's Anti Headache Powders

Drs M J Sanford and D V Van Wagman of Suffern N Y writing independently of each other report the following case of poisoning from headache powders

C M male aged 7 years awoke in the morning complaining of headache His mother gave him some Epsom salts and a cup of coffee As he was no better at 9 o clock she gave him one of "Taylor s Anti Headache Powder " The boy was given another powder at 10 15 and another at 11 o'clock Soon after taking the third powder the child complained of faintness and lay down At 11 45 his lips and tongue became very blue his face was yellowish and his eyes staring—protruding—and unseeing He was put on a lounge and apparently went to sleep, as he snored. At 12 15 he commenced to jerk twitch and scream The convulsive movements became worse especially of the right side, and the boy died shortly before 1 o'clock 10 minutes before a physician arrived

On the box containing the powders and on the circular accompanying it the following is printed

Taylor s Anti Headache Powders. Guaranteed Absolutely Harmless Contain no Opium Chloral Cocaine Antipyrine Morphine Phenacetine Bromide or Other Injurious Substance

Never known to fail in curing Bilious Sick or Nervous Headache and Neuralgia in a few minutes

Directions —Take one powder dry on the tongue and drink a little water Repeat if not entirely relieved in twenty minutes

None genuine unless Signed W Scott Taylor

The Taylor Drug and Chemical Co Manufacturing Chemists—Laboratory—Trenton N J

Dr Van Wagman sent us a box of the powders, examination indicates that they contain as active constituents acetanilid approximately 30 per cent, and caffein, approximately 2 5 per cent Each powder of the specimen submitted weighs approximately 15 grains and, therefore, contains about 4½ grains

Personal Liberty and "Patent Medicine"

Although a vast majority of newspaper proprietors still seem to have no regard for the harm they do by allowing fraudulent and misleading "patent medicine" advertisements to appear in their papers, more and more are coming out on the side of cleanliness A few remarks on the subject of personal liberty in the Detroit *Civic News* work up to a climax that is worth quoting After remarking that those citizens who are most strenuous for "personal liberty," meaning by that, liberty to make public nuisances of themselves, are likely to protest against goody goodies" at the first approach of restrictive legislation administration, or agitation, the editor goes on as follows

' Personal liberty' may involve the right to drink liquor, but it does not involve the right to get drunk and beat one's family make a spectacle of ones self on the public street or go off to a bawdy house on a carouse 'Personal liberty' may give one the right to smoke, but it does not give on the right to blow his smoke into another mans face, or to vitiate the atmosphere in a room where another man who does not like smoke polluted air, has a right to be 'Personal liberty' may give a man a right to cultivate 'art' in any way he sees fit, but it does not give him the right to make a public nuisance of himself or to post pictures in his windows or on the billboards to smite our eyes, and to school our children in the ways of vice and crime, whether we like it or not 'Personal liberty' may give people the right to corrupt their own bodies and fool with their own health but it does not give quack doctors the right to issue circulars and newspapers to print advertisements full of base lies calculated to mislead the young and inexperienced into the notion that Nature s laws can be violated with impunity"

The Slaughter of the Innocents Continues

Dr S D Barnes Seattle, Wash sends us an account of the death of twin babies which, he says, occurred from an overdose of Mrs Winslow's Soothing Syrup

On March 31 the children were found dead in the perambulator in which they had been put to sleep Deputy Coroner Wiltsie and Police Sergeant Bannick investigated the affair At first they believed that the children had been smothered but later were informed that they had been given a dose of soothing syrup before being put to bed the night before The stomach contents were analyzed and the report of the analysts stated that small quantities of opium were found The coroner decided that an inquest was unnecessary and signed the death certificate giving accidental poisoning as the cause of death In commenting on this case, the Seattle *Sunday Times* states that indiscriminate use of sleeping potions for infants in many cases leads to child murder, unintentional it is true but none the less murder The *Times* also deplores the fact that in Washington there is [illegible] regulating the sale of the deadly pat[illegible]

Correspondence

Medicinal Foods

PHILADELPHIA, May 11, 1907

To the Editor —The report of the Council on Pharmacy and Chemistry in regard to medicinal foods in THE JOURNAL, May 11, 1907, is exceedingly important and most instructive The knowledge that we had before was such as to have led very many exact and thoughtful clinicians to consider these foods of extremely limited value The report gives most clear and impressive evidence that this is indeed true In the teaching and practice of dietetics we need more than anything else, I think, greater exactness We need this most of all in those cases in which the diet is necessarily very restricted and in which, consequently, inaccuracies may be dangerous The report is especially welcome, therefore, for it is in this class of cases that these foods are most likely to be used and misconceptions regarding their value are very general The common use of these medicinal foods, so far as I have been able to learn from my contact with those who have some dependence on them, is due chiefly to three things

1 Their nutritive value is thought to be very great Often, indeed, it is believed that the very few ounces that can be given provide a reasonably large day's ration This misconception which is a dangerous one, has been fathered and fostered by many of the manufacturers, and some of them, I have been rather pleased to find, have an honest, though sadly mistaken, belief in the truth of their statements The report of the Council definitely straightens out this matter It is of very real and earnest importance that the results of their analyses should become generally known and should be properly appreciated I have repeatedly had occasion to calculate the actual calorific value of the day's ration of patients whom I found using these foods, by the advice of their physicians, as a more or less considerable part of their diet In such instances I have found almost as a rule, that they were taking, at most, one third of what they actually required in order to maintain nutrition, usually, indeed, it was less than this One of the most serious things, therefore, that they were suffering from was more or less severe starvation I find, in fact from this report of the Council, that I have usually been too generous in the approximate figures that I have used in calculating the value of these foods It is true, as we are often told—particularly by the manufacturers—that the calorific value is not the only consideration regarding foods, but it is equally true that it is the first and the most essential consideration No matter how pleasing to the palate or to a disordered digestion a food may be, the amount of it must be sufficient, or the patient's nutrition will suffer, and if the deficiency is very great he will die of starvation I have long been most thoroughly convinced that many a patient has suffered severely when preparations such as these were being used and that not a few of them have died chiefly of starvation, while the medical attendant, believing what he has been told as to their nutritive value, has attributed the fatality, not to the starvation but to the disease for which the patient was being treated This report of the Council makes it impossible to escape the feeling that this has occurred even more frequently than had been suspected

2 A not uncommon cause of the use of these preparations is the fact that it is very easy to remember the names of a number of proprietary foods and to order them, while it is a little more difficult to acquire ready knowledge of a variety of simple preparations that can easily and cheaply be made in the home If one faces this matter fairly, however, it is apparent that to do this is merely to require the patient to pay dearly in money and perhaps in health, for one's laziness or ignorance, and I think that this plea for their use can scarcely be urged very strongly On this point, however, I think many a practitioner can throw the responsibility for his use of such preparations back on his medical education His *alma mater* has treated the teaching of dietetics in such a stepmotherly way that while it might have been made easy for him to use simple and cheap foods properly it seems actually difficult to him, because largely unknown, and he grasps at the tangible, even though it be costly to his patient and of unknown composition Much of the use of these foods depends simply on imperfect teaching of dietetics

3 It is frequently believed—and this belief is most energetically encouraged by the manufacturers—that the medicinal foods are often borne by disordered digestive tracts, when other foods are not On the contrary, I think that most clinicians that have attempted to use other foods carefully have found themselves continually growing more effectually weaned from the use of such preparations, because others do better If one acquires a very moderate degree of skill and resource in using simple and comparatively cheap home preparations, one rarely has the slightest temptation to use the proprietary preparations It is true that if one believes that a few teaspoonfuls of the medicinal foods are equivalent, for example, to a quart of milk, one may readily believe that it is much easier to nourish a patient thoroughly with them than with milk or various home preparations, but such a belief is ridiculously erroneous If the actual food value of a diet that has been ordered be carefully determined, one finds that one can get more into the patients by other means than by using these foods

At most, there is but one limited sphere, to my mind in which they have any usefulness In those very exceptional cases in which capriciousness on the part of the patient, uncertain appetite and irritable digestion combine to make it very difficult to get anything like enough food into him—cases in which even very small added quantities of food are very important and it becomes necessary to provide a great variety—they are sometimes useful, even at a high price, simply because they increase the number of things from which one can choose If one realizes that the few drams that can be given of these preparations are equal in value to only the same number of drams, or less of milk, one can properly make the patient pay a high price for even a little increase in variety Such cases, however are rare If the same amount of time that is often devoted to studying the advertisements of these foods were given to learning the variety of ways in which more valuable and less expensive foods can be prepared at home the number of such cases would become very small indeed

A very important disadvantage of these foods, and one that leads me to avoid them almost as much as does their low nutritive value, is their alcohol content The report of the Council dwells on the fact that if an amount of these preparations sufficient to maintain nutrition were given, the patient would often be made continuously drunk But even in the small doses that are customarily used the quantity of alcohol is often irritating to the stomach and may be disadvantageous in other ways—particularly in nervous cases The figures given by the report show that when one gives food in the form of these preparations, he must give, at the same time, approximately, from one to five times the quantity of alcohol that is given of the simple non toxic foods Would it not be utterly irrational to be obliged to give a small dose of strychnin, for instance, with each small portion of food, and to be obliged also every time that one increased the food, to increase coincidently from one to five times the amount of strychnin that one was giving? This is what happens with these preparations in regard to alcohol, and it is so frequently disadvantageous that this objection alone can not but be an exceedingly weighty one

I have no doubt that, in answer to the report of the Council and to any comments that may be made on it, many practitioners will recall cases in which these preparations have been used in small amounts, and the patients seem to have been kept alive by them I think we may ask such persons to remember the fact that human beings can live for some weeks without any food at all, if only some fluid is given them, and that temporary starvation often does actual good in suitable instances But even temporary starvation is a dangerous practice to employ without realizing that one is using it, and protracted starvation is highly dangerous

DAVID L. TOSATZ, MD

Danger of Fire in Formaldehyd Disinfection

PHILADELPHIA, May 2, 1907.

To the Editor:—The increased efficiency of formaldehyd disinfection as applied at the present time by means of the formalin permanganate method of evolving the gas has brought with it a new danger, uncertain, yet none the less real, in consequence of the fact that on several occasions at least, the mixture has been known to take fire spontaneously.

During the winter of 1906-7 Dr. Courtland Y. White of Philadelphia, in connection with some disinfection work which he was doing for the Department of Health of the state of Pennsylvania, observed on three occasions that the mixture caught fire after the combination of the constituents had begun and the room had been closed. It was fortunate that the fact was discovered on one of these occasions as the flame was so high as to endanger nearby articles in the room. Suspecting the possibility of impure ingredients, he wrote to Health Commissioner Dixon concerning the matter, and Dr. Dixon referred the matter to me for consideration and investigation.

It is well known that there is considerable uncertainty connected with reactions in which potassium permanganate plays a part and that even with inorganic substance as in the Kjeldahl method for the estimation of nitrogen, there is some time a spark or flash of fire when the permanganate is added to the other constituents. In the formalin permanganate method it has been customary to use two parts of formalin to one part of permanganate, adding the latter to the former and quickly leaving the room before the violent evolution of gas which shortly takes place has time to affect the operator. Working with quantities in some cases as high as one pound of permanganate, the amount of heat developed must be very great and if there are any uncertain factors present, such as organic matter in the container which has been imperfectly cleaned, the danger of possible ignition is that much greater.

The flame which appeared on the occasion described by Dr. White was a pale blue flame reaching several feet into the air from the generating container. This agrees with the appearance of the flame of formaldehyd gas which burns freely when ignited even if mixed with a fair proportion of steam, as is usually the case.

The gas may be ignited from a 40 per cent. solution of formaldehyd by simply heating it and applying a match to the surface after ebullition has begun. And when the formalin permanganate disinfection proportions are used in as small quantities as one ounce of formalin and one-half ounce of permanganate, using a beaker for a generator, the flame of the ignited gas has been observed to have a length of more than one foot.

In view therefore of the uncertainty regarding the cause of the ignition of the vapor in these observed cases and in recognition of the hitherto overlooked fact that formaldehyd vapor is very inflammable, it would be well to practice this method of disinfection with the precautionary measures of using small quantities of the ingredients (not over ¼ or ½ lb. of permanganate to a charge), in several containers surrounding these containers with larger ones containing water, being careful to extinguish all gas jets, pilot lights, fire and other possible causes of ignition and to keep the generators away from the sides of the room where a flame might be communicated to inflammable material. I do not believe that this method of disinfection need necessarily be abandoned, but it is essential that its limitations and dangers be not overlooked in its future use.

CHARLES H. LA WALL.
Consulting Chemist to Dr. Samuel C. Dixon, Commissioner of Health of the State of Pennsylvania.

The Review of Dr. Babcock's Book on Diseases of the Lungs

CHICAGO, May 5, 1907.

To the Editor:—In THE JOURNAL, April 27, page 1453, there appears a review of Dr. Robert H. Babcock's recent work on Diseases of the Lungs. In common justice to this excellent treatise and in fairness to the author himself, I beg leave to reply to this review.

In the first place, the reviewer of Dr. Babcock's book fails to take into account the fact that it is not a system, that the author offers us, but a monographic treatise on a special topic, and that in consequence of this he has been subject to certain restrictions of space and scope which prevent him from exhausting in full the diseases under consideration. He has apparently neglected, as well, to read the author's preface, in which is distinctly outlined the limitations of the book. Instead of finding fault as does this reviewer, with the fact that certain diseases, such as bronchial asthma and pulmonary emphysema, are not considered in full detail, we should record our obligation to the writer that he has not burdened his text with encyclopedic dissertations on all points, but has in place furnished us with practical readable discussions from a mature judicial standpoint, of the clinical aspects of the various diseases dealt with according to his prefatory claim. The reviewer inadvertently misleads by the statement that pulmonary emphysema is not given more space than is devoted to atelectasis and pneumonoconiosis, whereas the fact is that 23 pages are devoted to emphysema while but 15 to the two latter diseases together. He criticises the scant space given to the consideration of acute miliary tuberculosis, apparently forgetting that it is a book on diseases of the lungs that he is reviewing and not a treatise on general medicine, and unmindful of the author's explanation in his text of his reasons for excluding it from extended description. The reviewer again deprecates the comparatively large amount of space devoted to symptomatology, apparently having little faith himself in purely clinical aspects of disease. In this criticism he fails to allow for the fact that the case illustrations, which are especially rich and varied and add greatly to the interest of the book, are included in the sections on symptomatology, thereby swelling their bulk.

The reviewer next criticises the author for mentioning the names of physicians to whom he is indebted for the referred cases in his clinical reports. In thus signifying his professional obligations, the author follows an old custom which has characterized the amenities of English and American medical literature for many decades. It is one of those customs of which, unfortunately, there are too few surviving in this busy age, which mark the pleasant courtesies of other times.

The review closes with a commendation of the author's style, but evidently the reviewer can not permit himself an unqualified approval, for abashed apparently at his one indulgence in praise, he proceeds to charge a lack of emphasis and force to the "author's elegance and fluency." "Emphasis is the insistence of a weak argument," and the intelligent reader will acknowledge his obligations to the distinguished author for leaving something to his discrimination and understanding. "There is not a single epigram in the book," says the reviewer in closing. The making of epigrams in medicine is a dangerous business. In no branch of science is truth so relative a thing as in medicine. What is to-day an epigram becomes a glaring half truth to-morrow. "Experience is fallacious and judgment fleeting," wrote Hippocrates many centuries ago.

It must be humiliating to the author to have the only unqualified approval of his work consist of a commendation "of the author's advocacy of infection (in tuberculosis) as opposed to the old idea of hereditary predisposition." Thus, again are the common virtues applauded while the many higher excellences are passed over in silence. Dr. Babcock has already made good in his excellent work on "Diseases of the Heart," which has met with a most favorable reception at the hands of the profession. "Good meat needs no basting," and those who read his companion work on the diseases of the lungs will not be disappointed.

ARTHUR P. ELLIOTT, M.D.

[I have no wish to enter into any controversy with Dr. Elliott about the book itself, but I wish to correct certain impressions which his letter may make. It is true that I did not recognize in Dr. Babcock's book a monograph. I looked on it rather as a systematic account of the diseases of the lungs and pleura, noting in consequence the necessity of restrictions both in space and matter. Moreover I read carefully both preface and text. I still feel that the detailed accounts of numerous cases without postmortem notes might well have been omitted so that space might have been spared for more important matter. Of what value for example is the case recently seen in Elgin, Ill., in consultation with Dr. O. T. Bolton, since that

present writing it is too soon to report the outcome of this case'" (p 164) And "the only excuse for so detailed a narration' of another case stretching over two and three-fourths pages, 'is its instructive portrayal of one of the modes in which this truly terrible disease (secondary pneumonia) slays its victims," (pp 210 212) Moreover, I am ready to repeat that relatively too little space is accorded both to pulmonary emphysema and to acute miliary tuberculosis of the lungs On page 550 I fail to find any explanation in the author's text of his reasons for excluding acute miliary tuberculosis of the lungs from extended description, Dr Elliott to the contrary not withstanding But I do find expressed a reason why "it is considered practical to recognize" it, and in this I thoroughly agree with Dr Babcock Dr Elliott censures me for criticising Dr Babcock for mentioning the names of physicians who called him in consultation Yet why should these names be given? Why burden the reader with them? What matters it where the patient lives whether in Macomb, Ill, or Ottumwa, Iowa? And surely the amenities of English and American medical literature scarcely demand the name of an earlier consultant, proved to have been in the wrong by a subsequent postmortem examination (p 239), even though the family physician and Dr Babcock also fell into the error

Dr Elliott's last paragraph is not just Several commendations of the book appear in the original review, to which the reader is referred It is true that I stated that "at times the author's elegance and fluency get the better of strength and force" This I fully believe and I count it not wholly a disparaging criticism And as for the epigram, Dr Elliott, I thank you for the illustration Do you believe that this ancient epigram of Hippocrates, 'Experience is fallacious and judgment fleeting' is to become a glaring half truth to morrow?"—THE REVIEWER]

The Neglect of the Anamnesis.

SCRANTON PA, April 26 1907

To the Editor —I agree with Dr Bayard Holmes in his recent article (THE JOURNAL April 20 page 1349) that the patient is our study and that regardless of surroundings, conditions or circumstances he expects us to cure him without reference to the name of the disease The patient first asks "Can you cure me?" Second "How long will it take?" Scientific diagnostic means such as the Widal typhoid reaction used to the exclusion of common sense will not make the patient well any quicker, as they are only confirmatory and there are enough other signs to teach one that he is dealing with a sick man I cite this method not to condemn it, but to illustrate the tendency to forget that we are treating the genus *Homo* and not the bacilli

The first and foremost factor is the patient Get him well Forget if you will all the technic or, if you will, elaborate it to your heart's content, but for the love of humanity use your reason and treat your patient even as you would be treated We must study our patients To know that we have not neglected our patients will not only bring us comfort, but will bring us nearer perfection and nature and natural processes

D W EVANS, M D

Temperance Lunch.

HARTFORD, CONN May 8, 1907

To the Editor —I have received a number of inquiries relating to the temperance lunch proposed at Atlantic City June 6 It should be distinctly understood that this occasion is not to promote any particular theory, or society, or any special effort to enlist or pledge any one to the so called temperance cause The purpose is simply to gather, and informally talk over the many questions which are arising about this problem It seems eminently fitting that the American Medical Association the largest medical society in the world, should recognize this subject in this simple way and indicate that we are not indifferent to the medical and hygienic interests which center about it

The Society for the Study of Alcohol has simply volunteered to manage and conduct this event in response to the request of a number of persons who feel that the members of the American Medical Association should show an equal interest in this subject to that of the great foreign societies At the British Medical Association, at Toronto, last fall a similar lunch attracted over 600 persons, the full limit of the hall The whole affair was informal and each speaker represented himself personally, and it was a frank, open expression of opinions

I appeal, therefore, to every physician of the Association to show his interest in the general subject by making this occasion prominent and eventful, and by attending this lunch with his family and hearing what may be said by some of the leaders of the profession

I shall be very glad to give any further information or details

T D CROTHERS M D

Dentists Also Dupes of Nostrum Makers—A Letter with Spirit

SOMERVILLE, MASS, April 17, 1907

To the Editor —I wish to write a word of praise for the great work THE JOURNAL is doing in educating the medical profession on the nostrum question Keep up your good fight for ethical medicine Ten years ago, when I was in the drug business I realized that the medical profession was being lowered by the nostrum vendors, and I think we are indebted to the *Druggists Circular* for the stand it has always taken for ethical medicine The medical profession has been and some of its members are still being bluffed by the proprietary men but nothing compared to the dental profession The dentist is the acme of credulity About a year ago I read a paper before three Massachusetts dental societies on the subject It was sent to three leading dental trade journals They all refused to publish it I have read "Adding Insult to Injury" (THE JOURNAL, Jan 26, 1907, page 340) referring to Antikamnia This is fine You strike right from the shoulder and you touch one phase of the subject which I am ashamed to say I had overlooked I intend to act, however Here is a copy of a letter which I am mailing to Merck to day

DEAR SIRS —I am astonished to find in the columns of the *Archives* advertisements of the two fake preparations Antikamnia and Phenalgin especially after they have been so thoroughly exposed by THE JOURNAL of the American Medical Association When my subscription expires I am through with you and your journal Furthermore if you continue to carry these ads I shall cease prescribing and using Merck's products of every description

G B SQUIRES, PH G, D D S

Book Notices

AMERICAN PRACTICE OF SURGERY A Complete System of the Science and Art of Surgery by Representative Surgeons of the United States and Canada Editors Joseph D Bryant M D and Albert H Buck M D Complete in Eight Volumes Illustrated Volume II Muslin Binding Pp 778 Price $7 00 New York William Wood & Co

The first volume of this work was recently reviewed *in extenso* in these pages, and the second volume, just received, maintains the same general standard In part vi which deals with such infections as leprosy, plague, glanders, anthrax, actinomycosis, mycetoma, rhinopharyngitis mutilans and scurvy, the space assigned to some of the subjects is entirely out of proportion to the importance of the subject For instance twenty seven pages are devoted to leprosy a rare curiosity in this country, and but five pages to actinomycosis, with but a single paragraph on symptomatology although actinomycosis is common in comparison with leprosy and presents such varied manifestations as to make it worthy of more thorough consideration In the chapter on syphilis it is stated that "up to the present time the cause of syphilis has not been discovered" notwithstanding the fact that the claims made for the *Spirochaeta pallida* as the infectious agent seem most convincing if not overwhelming The use of poultices of absorbent cotton saturated with 2 per cent carbolic acid solution for infections, as recommended on page 155 when applied to the extremities, carries great danger of producing gangrene of the fingers or toes, as has been noted repeatedly In the chapter on 'Surgery of Diseases of the Skin,' several subjects are handled which are also included in other chapters of this volume—for instance,

furunculosis, carbuncle, anthrax, glanders, etc.—so there is considerable unnecessary repetition The present day extensive use of electricity in all lines of industry gives rise to frequent electric burns and shocks, the immediate and after effects of which are often very distressing The subject of "The Effects of Electric Currents," therefore, deserves more thorough consideration than it receives in the space of scarcely a page There are other chapters in this volume, however, which are very good, notably among which may be mentioned those on "Gangrene and Gangrenous Diseases," "Surgical Diseases of the Lymphatics," "Gunshot Wounds," etc, so that the entire volume makes a fitting second in this great work

ALCOHOL The Sanction for Its Use Scientifically Established and Popularly Expounded by a Physiologist. Translated from the German of Dr J Starke Cloth Pp 317 New York and London G P Putnam s Sons 1907

This book presents a candid defense of the use of alcohol as a beverage, with arguments drawn from scientific experiments as well as from experience and current opinion The scientific facts appear to be, in the main, correct, but the propositions which the author attempts to establish will seem to many open to question He distinguishes sharply between the moderate use of alcohol and its use for purposes of intoxication, as if intoxication were a matter of deliberate choice The moderate drinker, according to him, drinks for the purpose of stimulation, the drunkard, to obtain stupefaction It is a delicate task to decide on the motives of men, but, while some men drink to drown their sorrows, it would seem to be the teaching of experience that others reach the stage of drunkenness, even when they are habitual drunkards, by taking the first glass from a desire for stimulation The author pronounces the dictum 'The alcohol of alcoholic drinks does *not* of itself possess the property of inducing persons to take ever increasing amounts" His ground for this statement is thus expressed 'We are all familiar with the 'leading to constantly increasing quantities' If it were correct, all those who use alcohol must end in drunkenness" The fallacy of this is shown by the very words moderate and temperate, which of themselves indicate an effort of the individual to restrain himself, to oppose a tendency Shall we say that the pneumococcus has no tendency to produce disease because many individuals harbor it without dying of pneumonia? The third proposition is that the moderate use of alcohol has nothing to do with the production of any disease This statement seems to be fairly well sustained, although there might be differences of opinion as to the meaning of the word moderate His discussion of the part played by alcohol in the etiology of disease will convince the lay reader of uncertainty of the conclusions drawn from cases complicated by so many etiologic factors, and he can hardly escape attributing the same uncertainty to argument drawn from the successful use of alcohol as a medicine If physicians have been mistaken in attributing disease to alcohol, why may they not have been equally mistaken in assigning alcohol as the curative agent? The account of the action of alcohol as determined by experiment is clear but not detailed The author holds that alcohol is a nutrient possessing the specific property of stimulating the nervous system, but not a poison in the popular sense of that term The position of the author will undoubtedly invite criticism, and it is to be hoped that such criticism will result in establishing the truth concerning alcohol and alcoholic beverages

MANUAL OF DIAGNOSIS AND TREATMENT OF DISEASES OF THE EYE By Edward Jackson A M M D Professor of Ophthalmology in the University of Colorado Cloth Pp 615 Price $2 50 net Philadelphia W B Saunders Co 1907

In this second edition Dr Jackson has added much material that has proven of value since the appearance of the first edition, especially the studies of new conditions and of new remedies and methods of treatment The book is intended as a manual for the beginner in ophthalmology and for the general practitioner Abundant references are given to the original sources of the matter presented, making it very easy to go more deeply into a given subject if desired The chapters on refraction are particularly valuable coming, as they do, from a man of Dr Jackson's peculiar ability and painstaking care in this particular branch of ophthalmology Among the important additions which have been made are a number of the latest diagnostic methods, such as testing the light sense, mapping central scotomata, "fogging" method in refraction, diseases and congenital defects of the ocular muscles, etc., etc The book might be more freely illustrated with advantage, as in no work are illustrations of as much value as in one intended for beginners The illustrations here are practically all schematic, an advantage always to the student who first approaches a subject. There is a fairly complete list of "remedies and applications," and the book closes with a consideration of the commoner operations in ophthalmology

RACE CULTURE OR RACE SUICIDE? A Plea for the Unborn By Robert Reid Rentoul Doctor of Medicine Member of the Royal College of Surgeons England Cloth Pp 182 Price 7s 6d. net ($1 87) New York The Walter Scott Publishing Co 1906

The author's line of reasoning runs something as follows The race is degenerating physically, as is shown by the increasing amount of illness, the rejections of recruits for the Army and Navy, the number of deaf and blind He estimates the number of those affected with temporary or permanent physical disability as one in five Mental degeneration is shown by insanity, criminality, vice, etc., and the number of cases is estimated at one in fifty, although, perhaps, this is too low The causes of degeneracy are put as the intermarriage with lunatics, idiots and feeble minded persons, child marriages, forbidding or restraining the healthy from marriage, encouraging the marriage of the unfit, release of asylum patients before recovery, overwork of the young brain, unsuitable employment for women and children, abuse of alcohol, undesirable immigration, venereal diseases, abortion and sexual excess The legal restrictions of marriage in various countries are described, and then the author advances the remedy which he advocates, viz the sterilization of certain degenerates so that they can not transmit their enfeebled constitution to posterity He claims that this proposal has received support from a considerable number of medical men A large mass of evidence is presented, and while one may not agree with the author's conclusions, it must be admitted that an *a priori* case is made out If degeneracy threatens the extinction of the race the legal restrictions of marriage for the unfit is certainly an appropriate, although it may not be an effective, remedy It will seem to many that voluntary or forced sterilization can be imposed on so few as to make it a measure of doubtful utility However, it is desirable that this remedy be thoroughly canvassed, and it is the mission of this book to bring the remedy into public notice, a mission that it is admirably adapted to fulfill

PSYCHOLOGY APPLIED TO MEDICINE. Introductory Studies by David W Wells M D Lecturer on Mental Physiology in Boston University Medical School Cloth Pp 141 Price $1 50 net Philadelphia F A Davis Company 1907

This takes up the subject in a simple and fundamental manner and works up to a pertinent criticism of the too common disregard of the practitioner for the potency of suggestion The book will aid in an understanding of the success of quacks, "patent medicine" Eddyism and other means which often cure without material agency

Association News

ATLANTIC CITY SESSION

The railroad rates to the annual session of the American Medical Association at Atlantic City, June 4 7, were described in THE JOURNAL, May 4 That issue, the Atlantic City number, contained an illustrated description of Atlantic City, with the preliminary programs of the sections, lists of hotels and their prices meeting places, etc The rates mentioned in that issue did not refer to the Western Passenger Association, which granted one fare plus $2 for the round trip The same rate was authorized by the Central Passenger Association In the territory of the Trunk and the New England passenger associations the rate is one fare plus $1 for the round trip

A change has been made in the rules for transcontinental tickets from California on sale May 25 to 27 The return limit will be 60 days instead of 90 days Other tickets, on sale May 20 and 21, still have the final limit of 90 days

It is understood that detailed information has been furnished to all ticket agents and that they will provide purchasers of tickets with full information as to rates, routes, stopovers, etc

American Medical Special

A correspondent asks about the route of the American Medical Special This Pullman vestibuled train is to run as a section of the Pennsylvania's Chicago New York eighteen hour train The schedule insures it a fast, steady run, and its equipment will be as good as that on the famous flyer The Susquehanna River at Harrisburg will be passed about 6 o'clock in the morning, giving the passengers an opportunity to enjoy the beautiful country between Harrisburg and North Philadelphia, at which point the train turns off to Atlantic City, it runs from Chicago to Atlantic City without change and does not enter the Broad Street station

This train will leave Chicago, Sunday, June 2, at 3 p m, reaching Atlantic City early Monday afternoon The fare is $21 50 for the round trip, Chicago to Atlantic City and return For sleeping car reservations and further information one may address Mr C L Kimball, assistant general passenger agent, 2 Sherman Street, Chicago Special cars may be arranged for by parties of sufficient size, from west, northwest or south, who wish to join this special train

Tickets are on sale at the special rates from Western passenger Association territory, May 30 to June 3 Tickets may read by way of Washington if desired, so as to allow arrangements to be made for a side trip to the Jamestown Exposition A correspondent has called attention to the fact that advertisements in THE JOURNAL, May 4, give the final limit of leaving Atlantic City, after tickets have been extended, as June 14, while the statement on page 1522 in the Atlantic City writeup named June 18 This is explained by the fact that the railroads first named June 14 as the limit, but page 1522 went to press late enough to include later information, after the date had been extended to June 18

Jefferson Medical College Clinics

The Jefferson Medical College has arranged a series of clinics, ward walks and demonstrations for visiting physicians on June 8, 10, 11 and 12 These will be in connection with the dedication of the new hospital, details of which were given in the Atlantic City Number (May 4) of THE JOURNAL

SATURDAY JUNE 8

9 30 to 11 30 Clinic, Frontal Sinus Prof Gustave Killian Freiburg and Laryngologic Clinic, Prof Theodore Gluck Berlin
9 30 to 11 30 Physiologic Laboratory Prof Albert P Brubaker
2 00 to 2 00 Surgical Clinic Prof J Chalmers DaCosta and guests
12 00 to 2 00 Medical Ward Walks Prof H A Hare and Prof. James C Wilson
2 00 to 4 00 Gynecologic Clinic Prof. F E Montgomery
2 00 to 4 00 Neurologic Ward Walks Prof. F X. Dercum
4 00 Regional Anatomy (white board sketches) Prof George McClellan
5 00 Pathologic Laboratory Prof W M L. Coplin

MONDAY JUNE 10

9 30 to 11 0 Obstetric Clinic, at Maternity Prof. Edward P Davis
10 00 to 11 30 Genitourinary Clinic Prof Orville Horwitz
12 00 to 2 00 Surgical Clinic Prof John H Gibbon and guests
2 0 to 4 00 Ophthalmologic Clinic Prof Howard F Hansell
4 00 to 5 00 Clinical Medicine Prof Solomon Solis Cohen

TUESDAY JUNE 11

10 00 Mastoid Clinic Prof S MacCuen Smith
11 00 Orthopedic Clinic Prof H Augustus Wilson
12 00 Pediatric Ward Walks Prof Edwin E Graham
1 00 Dermatologic Clinic, Prof Henry W Stelwagon
2 00 Laryngologic Clinic Prof D Braden Kyle
3 00 Ophthalmologic Clinic, Associate Prof William M Sweet
4 00 Gynecologic Ward Walks Asst Prof John M Fisher

WEDNESDAY JUNE 12

10 00 to 12 00 Gynecologic Clinic Prof F E Montgomery
12 00 Operations Dr John C DaCosta
1 00 to 2 00 Surgical Clinic Prof J Chalmers DaCosta
00 to 5 00 Obstetric Clinic at Maternity Prof. Edward P Davis

H AUGUSTUS WILSON, Chairman
HENRY W STELWAGON,
EDWIN F CRAHAM
J CHALMERS DA COSTA,
Committee

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers of the U S Army for the week ending May 11 1907

Lambert Samuel E, asst. surgeon ordered to accompany Major L R Morris surgeon, from Fort Logan Colo to Army General Hospital Washington Barracks D C Asst Surgeon Lambert will on arrival at Washington report to Major William H Arthur surgeon president examining board for examination for advancement instead of reporting at Presidio of San Francisco as directed in previous orders

Snyder Henry D surgeon leave extended 8 days

Lyster William J L asst. surgeon, granted 10 days leave of absence

Noble Robert I, asst surgeon relieved from duty at Fort Casey Wash and will repair to this city and report to the chairman of the Isthmian Canal commission for duty with the commission on the Isthmus of Panama

Scott George H asst surgeon granted 30 days leave of absence

McCaw Walter D surgeon detailed to represent the medical department of the Army at the Fourteenth International Congress on Hygiene and Demography to be held at Berlin Germany Sept 23 to 29 1907

McCulloch C C Jr surgeon now at Ancon Canal Zone will proceed at once to Fort Meade S D for temporary duty

Devereux J R, asst surgeon granted 30 days leave of absence

Barney Charles N asst surgeon, granted 10 days leave of absence

Wertenbaker Clark T contract surgeon left Madison Barracks N Y and arrived at Fort Wadsworth N Y for temporary duty

Bell Leonard P contract surgeon arrived at Fort Riley Kans for duty

Dillon G Parker, contract surgeon returned to Fort Bliss Tex from temporary duty at Fort Apache Ariz

Henning, Oswald F contract surgeon arrived at Fort Barrancas Fla for temporary duty

Ingalls Raymond E dental surgeon left Fort Omaha, Neb for duty at Fort Crook Neb

Navy Changes

Changes in the medical corps U S Navy for the week ending May 11 1907

V C B Means surgeon on discharge from treatment at the Army and Navy General Hospital Hot Springs, Ark, ordered home and granted sick leave for three months

M S Elliott surgeon detached from the *St Louis* and ordered to duty at the Navy Yard Norfolk Va in connection with fitting out the *Olympia* and to duty on board that vessel, when placed in commission

H C Curl surgeon ordered to additional duty at the Naval Medical School Hospital Washington D C

E S Bogert Jr surgeon on expiration of leave ordered to the *Milwaukee*

I W Kite surgeon detached from the *Kearsarge* and ordered to the *Franklin*

G H Barber surgeon detached from the *Baltimore* when placed out of commission granted leave for one week and thence ordered to *Kearsarge*

R A Bachmann passed asst surgeon, detached from the *Franklin* and ordered to the *St Louis*

J R Waggener medical director having been examined by a retiring board and found incapacitated for active service on account of disability incident to the service is retired from active service May 6 1907 under provisions of Sec. 1453 R S

E M Brown passed assistant surgeon detached from the Bureau of Medicine and Surgery Navy Department and ordered to duty at the Naval Hospital New Fort Lyon, Colo

W H Short R I Longabaugh, F X Koltes M A Stuart assistant surgeons appointed assistant surgeons with rank of lieutenant junior grade from May 4 1907

J H Page surgeon detached from the *Milwaukee* and ordered to continue treatment at the Naval Hospital Mare Island Cal

Public Health and Marine Hospital Service

List of changes of stations and duties of commissioned and non commissioned officers of the Public Health and Marine Hospital Service for the seven days ended May 8 1907

Wasdin I surgeon granted leave of absence one month or so much thereof as may be necessary on account of sickness from May 10 1907

Oakley J H I A surgeon directed to proceed to Seattle Wash for special temporary duty on completion of which to rejoin his station

Fox C P A surgeon relieved from duty at San Francisco Quarantine and directed to proceed to St Michaels Alaska and assume charge of the service at that port

Trotter F I I A surgeon granted leave of absence for 10 days from May 8 1907

Vogel C W I A surgeon granted leave of absence for 5 days from March 27 1907 under Paragraph 191 of the Service Regulations

Burkhalter J T P A surgeon granted leave of absence for 25 days or so much thereof as may be necessary on account of sickness from April 20 1907

Warren B S P A surgeon granted leave of absence for 7 days from April 30 1907 under Paragraph 191 of the Service Regulations

Warren B S P A surgeon granted extension leave of absence for 3 days from May 6 1907

Steger F M asst surgeon granted leave of absence for 10 days on account of sickness from April 24 1907

Ebert H C asst surgeon assigned to duty on Revenue Cutter Perry effective May 15 1907

Hurley J R, asst surgeon directed to proceed to San Francisco, Cal for duty on the Revenue Cutter *Thetis*

Curley, C P acting asst surgeon granted leave of absence for 4 days from May 7 1907

Foster J P C acting asst surgeon granted leave of absence for 5 days from May 6 1907

Griffitts T H D, acting asst. surgeon leave of absence granted for 21 days from April 12 1907 amended to read 16 days only

Hamilton, H J acting asst surgeon granted leave of absence for 9 days from May 4, 1907

Stevenson J W acting asst surgeon leave of absence for 2 months without pay granted from Feb 8 1907 amended so as to grant him but 1 month and 15 days without pay

APPOINTMENTS

Dr James R Hurley of California commissioned (recess) as assistant surgeon, Public Health and Marine-Hospital Service May 4, 1907

Dr William M Bryan of Virginia commissioned (recess) as assistant surgeon Public Health and Marine-Hospital Service, May 4 1907

Dr Anthony J Lanza of the District of Columbia commissioned (recess) as assistant surgeon Public Health and Marine-Hospital Service May 4 1907

Health Reports

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended May 10 1907

SMALLPOX—UNITED STATES

Florida Hillsboro County April 20 27, 2 cases
Georgia Augusta April 23 30 4 cases
Illinois Aurora May 2, present Danville April 23 30 1 case Plainfield April 17 May 2 30 cases Springfield April 25 May 2, 1 case
Indiana Elkhart, April 20 27 1 case Indianapolis April 21 28 4 cases Jeffersonville April 1 30 1 case Lafayette April 22 29 1 case Marion April 1 30 4 cases Michigan City, April 1 30 1 case South Bend April 20 27, 1 case
Iowa Ottumwa April 6 27 10 cases
Kansas Kansas City April 27 May 4 2 cases (imported) Lawrence March 1 31 6 cases
Kentucky Louisville April 25 May 2 1 case
Louisiana New Orleans April 20-27 10 cases
Massachusetts Chelsea, April 20 27 1 case Lawrence April 20 27, 16 cases
Michigan Ann Arbor April 20 27 1 case Saginaw April 20 27 1 case
Minnesota Stillwater, Feb 1 28 1 case Winona, April 20 27 3 cases
New Jersey Hoboken April 27 May 4 1 case
New York New York April 20 27 1 case 1 death
North Carolina Greensboro April 20 27 5 cases
Ohio Cincinnati, April 26 May 3 1 case Cleveland, April 19 26, 1 case Toledo April 20 27, 4 cases
Texas Bell County May 3, 3 cases Houston April 20 27 9 cases San Antonio March 30-April 6 2 cases April 20 27 2 cases
Washington Spokane April 20 27 16 cases (2 imported) Tacoma April 20 27 1 case

SMALLPOX—INSULAR

Philippine Islands Manila March 16 23 7 cases

SMALLPOX—FOREIGN

Brazil Para, April 6-13 2 cases 1 death
Canada Toronto April 6 13 3 cases April 20 27 3 cases
Chile Coquimbo April 6 2 cases Iquique April 6 present.
China Hongkong March 9 23 53 cases 34 deaths Nanking March 23 30 2 cases Shanghai March 23 30 3 cases, 24 deaths Tientsin March 23-30, 2 cases
France Paris April 13 20 11 cases 1 death Toulon, March 1 31 12 cases 5 deaths
Germany general March 16 30 37 cases
Gibraltar April 14-21 1 case
India Bombay March 26 April 9 8 cases Calcutta March 23 30 81 deaths Madras, March 30 April 5 6 deaths Rangoon March 16-30 3 deaths
Italy general April 4-18 35 cases
Madeira Funchal April 14 21, 60 cases 12 deaths
Mexico Jalapa April 19 26 1 death Mexico March 23 April 6 23 deaths Vera Cruz April 20 27 1 death
Peru Lima, March 31 April 6 present
Russia Odessa April 6 13 11 cases 1 death
Siberia Vladivostock March 21 28 1 death
Spain Valencia April 14 21 1 case
Straits Settlements Singapore March 16 23 1 death
Turkey in Asia Bassorah March 30 April 6 5 deaths

YELLOW FEVER

Brazil Manaos April 6 13 1 death
Ecuador Guayaquil April 6-13 7 deaths

CHOLERA

India Bombay March 26 April 9 2 deaths Calcutta March 23 30 57 deaths Madras March 30 April 5 1 death Rangoon March 16-30 13 deaths
Straits Settlements Singapore March 9 16 1 death

PLAGUE—INSULAR

Hawaii Honolulu April 29 May 6 8 cases 4 deaths

PLAGUE—FOREIGN

Brazil Para April 6 13 3 cases 2 deaths
Chile Antofagasta April 6 21 cases 6 deaths Santiago April 6 present Talchhuana April 6 present
China Hongkong March 16 23 3 cases 3 deaths
Egypt Alexandria March 28 April 11 2 cases 2 deaths Assiout Province March 28-April 11 10 cases 4 deaths Bani Souef Province March 28 April 11 2 cases 2 deaths Girgeh Province March 28 April 11 6 cases 3 deaths Kench Province March 28-April 11 68 cases 48 deaths Minieh Province March 28 April 11 12 cases 4 deaths
India Bombay March 26-April 9 1 262 deaths Calcutta March 23 30 166 deaths Rangoon March 16-30 163 deaths
Peru Eten March 30 April 6 6 cases 5 deaths Lambayeque March 30 April 6 7 cases 3 deaths Lima, March 30 April 6 6 cases 1 death Paita March 30 April 6 11 cases 5 deaths Santiago de Cao March 30 April 6 1 case 1 death Trujillo March 30 April 6 6 cases 7 deaths

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION CONTRACT PRACTICE INSURANCE FEES, MEDICAL LEGISLATION, ETC

The Business Side of General Medicine

In a recent number of the *Texas State Journal of Medicine* Dr J E Dildy of Lampasas makes some pertinent and practical suggestions on the above topic Lack of space forbids production of the paper as a whole, but many of Dr Dildy's observations are so forceful as to be worthy of reproduction

Speaking of the position of the medical profession, he says "We are professional men in every sense of the word, we have the mental labor of lawyers, the moral standing of ministers, the technical knowledge of organized artisans and the business qualifications of school children The average man will give a lawyer $300 to $500, together with a lifetime's praise, to keep him out of the penitentiary for from two to ten years, and at the same time he will raise a phosphorescent glow and a kick that can be heard around the world if a doctor charges him $50 to $100 to keep him out of hell for a lifetime"

Commenting on the amount of work done by members of the profession, Dr Dildy says "We are the only people under God's ethereal tent to day who keep open shop 24 hours each day and 365 days in each year We are also the only laborers to keep on working for people who do not pay"

The attitude of a thinking member of the profession toward charity work is very well summarized in Dr Dildy's discussion of the amount of unremunerative work done by physicians I can carry my part of charity with as good a grace as most men I can go through rain, snow or mud and do my best, provided the case is one of worthy need, but to reward continually downright rascality, wilful drunkenness and wanton laziness is getting out of my line" The logic of his statements no one will deny, although very few of us have the moral courage to do what we know is our duty to ourselves, our patients, and our families along these lines

The following should be pondered on by every practicing physician "The average doctor tries to do too much work Every doctor wants everybody to patronize him He likes to be going night and day, rain or shine, Sunday or week day, hot or cold This is a business mistake It wears a doctor to a frazzle It gives him no time for bill collecting and business matters, no time for patients who naturally feel neglected and are slow pay as a consequence A doctor can do better work, more good, and build up a more enviable reputation if he coolly takes his time and is careful and painstaking in his examinations and if he takes into consideration the pathologic conditions he meets"

Dr Dildy is entitled to special praise for his honesty and clear sightedness regarding the value of professional service He says "The prices of our office work and consultations are usually disgracefully small This 'let me see your tongue' off hand, hurry scurry kind of professional laziness is not worth the price we get for it I have lost home, friends and fortune by not examining my patients carefully" Every physician who is honest with himself will admit the truth of the above statement Every man knows that when he attempts to diminish the amount of care and attention to details which he gives each one of his patients, he thereby diminishes the value of his services He also knows that, in the long run the man who takes pains is the man who receives large fees

Regarding the sins o sio commission of which we are all o s guilt to

himself freely and frankly He says "We fail to be professional We talk shop too much Silence is golden in medicine My mouth gives me most of my trouble What I say is what keeps me awake nights We are too prone to give free advice We sit and smile while some disgruntled chronic peels our competitor If, instead, we would shut him up we would grow in our own estimation and make a more favorable impression on the public"

As to his suggestions for remedies for existing evils he is equally emphatic The following advice is worth considering "We could be as ethical as the law fraternity, who by their union of action have stamped on our statute books nearly every law by which we are governed When doctors cast aside all petty jealousies and join and attend medical associations, money comes their way The best trade I ever made in a business sense was when I paid $2 50 to join my county society"

His closing words of advice are "Let us do less work and better work Let us not raise prices until we have raised our standard of service on a par with our ability Let us work honestly and not get lazy, keep enthusiastic and join our county societies, take postgraduate work and familiarize ourselves with modern medicine Let us not dicker in futures nor drink booze, but buy books and drink freely of the fountain of knowledge Let us work some, and play some, read some and collect some, and make money whenever we can"

It is a most gratifying indication of the increased interest in the practical side of medicine that papers like the above are becoming more and more common in our county societies Every medical organization ought to have, at least once a year, a plain, practical paper on these matters from some clear headed, progressive member, followed by a general discussion from the members of the society It will be found in many instances that such a program will help to clear away old animosities and misunderstandings by bringing about a free discussion and consideration as well as stimulating many physicians to a consideration of various phases of these questions, the importance of which has not heretofore been properly estimated

Legislation in Illinois

The work of the state legislature has been fairly satisfactory, so far as the medical profession of the state is concerned several of the bills were described in Illinois news in THE JOURNAL last week The two introduced by the State Board of Health were passed one enlarging the board's authority over health matters, the other authorizing reciprocity in licensure and empowering the board to define a medical college in good standing The Pure Food Bill was also passed in the last hour of the session It is impossible to say at present just what are its provisions The appropriation for the State Board of Health is increased over that of previous years The appropriation for the State Board of Charities, while not as large as asked for, nor as recommended by Governor Deneen, is large enough to allow some of the reforms contemplated The bill appropriating $386,000 for the University of Illinois to purchase the property of the College of Physicians and Surgeons in Chicago was passed at the eleventh hour

A bill directing that all chronic insane patients now kept in county poor houses and asylums be sent to the state institutions at the state's expense will put an end to a feature of county poor houses which has been the subject of much criticism For the third time the legislature refused to establish an osteopathic board of examiners or to place an osteopath on the State Board of Health The so called anti vivisection bill, the mental healers' bill the itinerant vendors' bill, as well as a number of other objectionable bills, failed to pass

The only bill to which the medical profession can take any exception is the bill establishing a board of examiners in optometry It is earnestly hoped that this will be vetoed by the governor as it has been alleged during both the present session of the legislature and that held two years ago that it was introduced for ulterior purposes and in favor of certain individuals for personal reasons

Medical Education and State Boards of Registration

COMING EXAMINATIONS

NEW YORK State Boards of Medical Examiners Albany May 21 24 Chief of Examining Division, Charles F Wheelock Albany

NEBRASKA State Board of Health State House Lincoln May 28 29 Secretary Dr Geo H Brash Beatrice.

INDIANA Board of Medical Registration and Examination Room 120 State House, Indianapolis May 28 31. Secretary Dr W T Gott Indianapolis.

NEW MEXICO Board of Health, Santa Fe June 3 Secretary Dr B D Black Las Vegas

MINNESOTA State Board of Medical Examiners St Paul June 4 Secretary Dr W S Fullerton St Paul

MARYLAND Homeopathic Board of Examiners Baltimore June 4 Secretary Dr Joseph S Garrison 848 W North Ave, Baltimore

OHIO State Board of Medical Registration and Examination Cleveland Columbus and Cincinnati, June 10-12 Secretary Dr George H Matson Columbus

KENTUCKY State Board of Health Louisville, June 11 Secretary Dr J N McCormack Bowling Green

SOUTH CAROLINA State Board of Medical Examiners Columbia June 11 Secretary Dr W M Lester, Columbia

OKLAHOMA Board of Medical Examiners Guthrie, June 11 12 Secretary Dr J W Baker Enid

KANSAS State Board of Medical Registration and Examination Kansas City Kansas June 11 13 Secretary, Dr F P Hatfield Grenola

IOWA State Board of Medical Examiners Des Moines, June 11 13 Secretary Dr Louis A Thomas, Des Moines.

FLORIDA Homeopathic Board of Medical Examiners Jacksonville June 18 Secretary Dr C W Johnson, Jacksonville

DELAWARE Board of Medical Examiners Dover June 18 Secretary of the Medical Council, Dr P W Tomlinson Wilmington

DELAWARE Homeopathic Board of Medical Examiners Wilmington June 18 Secretary, Dr C M Allmond Wilmington

NEW JERSEY State Board of Medical Examiners, State House Trenton June 18 19 Secretary Dr J W Bennett, Long Branch

VIRGINIA State Medical Examining Board, Lynchburg June 18-21 Secretary Dr R S Martin Stuart.

WYOMING Board of Medical Examiners State Capitol, Cheyenne June 19 Secretary Dr S B Miller Laramie

MARYLAND Board of Medical Examiners Baltimore, June 19 22 Secretary Dr J McPherson Scott Hagerstown.

PENNSYLVANIA State Board of Medical Examiners 708 Locust Street Philadelphia and in Pittsburg Academy Ross and Diamond Streets, Pittsburg June 25 28 Secretary Dr Winters D Hamaker, Meadville

PENNSYLVANIA Homeopathic Board of Medical Examiners N W Corner 15th and Cherry Streets Philadelphia June 25 28 Secretary Dr C S Middleton 1523 Girard avenue Philadelphia

PENNSYLVANIA Eclectic Board of Medical Examiners Harrisburg June 25 28 Secretary Dr W H Blake 2116 N Marvine Street Philadelphia

TEXAS State Board of Medical Examiners, Austin June 25 27 Secretary Dr T T Jackson, San Antonio

North Dakota April Report.—Dr H. M Wheeler, secretary of the North Dakota State Board of Medical Examiners, reports the written examination held at Grand Forks, April 2 4, 1907 The number of subjects examined in was 14, percentage required to pass, 75 The total number of candidates examined was 10, of whom 9 passed and 1 failed Three reciprocal licenses were granted at this examination The following colleges were represented

College	Year Grad	Per cent
PASSED		
University of Minnesota	(1905)	85 89
Lincoln Med Coll	(1904)	8_
Jefferson Med Coll	(1904)	87
Laval University Quebec	(1900)	78
University of Toronto Ont	(1903)	8_
University of Christiania Norway (1898) 85	(1903) 85	(1904) 75
FAILED		
Trinity Med Coll	(1903)*	
LICENSED THROUGH RECIPROCITY		Reciprocity with
National Medical University Chicago	(1900)	Illinois
Rush Med Coll	(1900)	Illinois
University of Iowa	(1900)	Iowa

*Percentage not given

California's New Examining Board—At a meeting of the new Board of Medical Examiners May 3, in San Francisco the organization was completed as follows President, Lincoln Cothran, San José, vice president, J Park Dougall, Los Angeles, treasurer, E Sisson Oakland secretary, Charles L Tisdale, Alameda, associate secretary, F Dudley Tait, San Francisco It was unanimously resolved "to cooperate with state examining boards and state medical societies in giving publicity to revoked certificates and irregularities in colleges and to send a copy of said resolution to every state board and to each

of the California colleges" The next examination will take place in San Francisco, Aug 6, 1907 All applications must be filed at least two weeks prior to said date

Texas Holds Last Meeting Under Old Law—Dr T T Jackson, secretary of the regular Board of Medical Examiners, states that a meeting of that board will be held at Austin, June 25, 26 and 27, 1907, which will be the last meeting before the new law goes into effect This will be the last examination to which any person will be admitted except one who has graduated from a reputable medical college having not less than four sessions of at least five months each

Society Proceedings

COMING MEETINGS

American Medical Association Atlantic City June 4 7

Illinois State Medical Society Rockford May 21 23
Connecticut State Medical Society, Hartford May 22 23
Indiana State Medical Association Indianapolis May 22 24
Arizona Medical Association Bisbee May 28 29
South Dakota State Medical Association Sioux Falls May 28 30
Amer Laryn Rhin and Otol Society New York May 30 June 1
American Academy of Medicine Atlantic City N J June 1 3
American Association of Medical Examiners Atlantic City June 3
American Gastro-Enterological Association Atlantic City June 3-4
American Proctologic Society Atlantic City June 3-4
American Urological Association Atlantic City June 3-4
Maine Medical Association Lewiston June 12 14
Massachusetts Medical Society, Boston June 11 12
Medical Society of the State of North Carolina Morehead City June 11 13
Rhode Island Medical Society Providence June 13
Medical Society of New Jersey Cape May June 25 27

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

Third Annual Conference, held at Chicago, April 29, 1907

The Chairman, Dr A D Bevan, Chicago, presiding

Besides the members of the Council, eighty four delegates were present, representing 22 state examining boards, 18 state medical societies, the 3 departments of the government services, 3 college associations, and 14 literary and medical colleges

DELEGATES

From States and State Boards *Colorado*, S D Van Meter, Denver, *Idaho*, W F Howard, Pocatello, *Illinois*, George W Webster, Chicago, *Indiana*, W A Spurgeon, Muncie, and W T Gott, Crawfordsville, *Iowa*, A P Hanchett, Council Bluffs, *Kentucky*, Chester A Mayer, Louisville, *Massachusetts*, E B Harvey, Boston, *Michigan*, Beverly D Harison and Oscar Le Seure, Detroit, *Minnesota*, W S Fullerton, St Paul, *Missouri*, R H. Goodier, Hannibal, and A H Hamel, DeSoto, *Nebraska*, Benjamin F Bailey, Lincoln, *New Jersey*, J W Bennett, Long Branch, *New York*, George E Corham, Albany, and William Warren Potter, Buffalo, *North Dakota*, F R Smyth, Bismarck, *Ohio*, H E Beebe, Sidney, and A Ravogli, Cincinnati, *Oklahoma*, J W Baker, Enid *Oregon*, A C Panton, Portland, *Utah*, Ralph T Richards, Salt Lake City, *Vermont*, W Scott Nay, Underhill, *Washington*, J B Eagleson, Seattle, *West Virginia*, John L Dickey, Wheeling, *Wisconsin*, W T Sarles, Sparta, A P Andrus, Ashland, J V Stevens, Jefferson, P H McGovern, Milwaukee and A B Bailey, Fennimore

From State Medical Societies *Illinois*, Charles L Mix, Chicago, and Frank P Norbury, Jacksonville, *Indiana*, L F Page, Indianapolis, *Iowa*, D S Fairchild, Des Moines, and C J Saunders, Fort Dodge, *Kansas* M F Jarrett, Fort Scott, *Kentucky*, W H Wathen, Louisville, *Maine*, Charles E Williams, Auburn, *Maryland*, Charles F Bevan, Baltimore, *Missouri*, Walter B Dorsett St Louis *Nebraska* H Winnett Orr, Lincoln, *North Dakota*, A L McDonald Grand Forks, *Ohio* Robert H Crube Xenia and R F Skeel Cleveland, *Oklahoma*, J O Glenn Stroud, and D C Hall Norman, *Tennessee* George H Price Nashville *Utah*, S C Baldwin Salt Lake City *Virginia* R H Whitehead Charlottesville, *West Virginia*, S L Jepson, Wheeling, *Wisconsin*, E Evans, La Crosse

From Other Organizations *United States Army*, Assistant Surgeon General P F Harvey, Chicago, *United States Navy*, Assistant Surgeon N T McLean, Chicago, *United States Public Health and Marine Hospital Service*, Surgeon G B Young, Chicago, *Southern Medical College Association*, Lewis C Morris, Birmingham, *Association of American Medical Colleges*, W J Means, Columbus, Ohio, and Fred C Zapffe Chicago, *American Medical Association*, George H Simmons, Chicago, *American Institute of Homeopathy*, Charles J Walton, Cincinnati, N B Delamater, Chicago, and Benjamin F Bailey, Lincoln, Neb , *American Medical Editors Association*, Allen B Kanavel W C Abbott and W F Waugh, Chicago

From Literary and Medical Colleges *Northwestern University* Dean Thomas F Holgate, Evanston, *University of Chicago*, Dean Albion W Small, Chicago, *Iowa College*, President J H T Main, Grinnell, *Vanderbilt University*, Chancellor J H Kirkland, Nashville, Tenn , *Lake Forest University*, R H McKee and Cornelius Betien Lake Forest, Ill , *University of Wisconsin*, Charles R Bardeen, Madison, *Lewis Institute* Lewis Gustafson, Chicago, *Rush Medical College*, Frank Billings, John M Dodson, and Ludwig Hektoen, *Indiana University School of Medicine*, Burton D Myers, Bloomington *Northwestern University Medical School*, J H Long and N S Davis, Chicago, *College of Physicians and Surgeons*, Charles S Bacon Chicago, *University of Iowa, Homeopathic Department*, George Royal Iowa City, *University of Michigan, Homeopathic Department*, W B Hinsdale, Ann Arbor, *American College of Medicine and Surgery*, William L Secor, Chicago

Others present were Richard M Fletcher and A R McDonald Chicago

The conference was called to order at 10 a m by the chairman Dr Arthur Dean Bevan Chicago, who delivered the following address

CHAIRMAN'S ADDRESS

The Council on Medical Education of the American Medical Association has invited you to this third annual conference to discuss the subject of medical education in America and to ask your advice and cooperation in the effort to elevate the standards of medical education in this country

We welcome you to this conference and thank you for your presence in the name of the American Medical Association

It would seem well first to review briefly the work of the Council as presented in the reports of the last two annual conferences and to present to you fully the work of the past year In 1904 the Council on Medical Education was created by the American Medical Association to act as its agent in the efforts to elevate the standards of medical education Its functions are to make an annual report on the existing conditions of medical education and to make suggestions which may lead to the gradual improvement in these conditions

THE PREVIOUS HANDICAP

The work of the committees on education which, before 1904, had undertaken this task had not been as satisfactory as was desired, chiefly because new men were appointed on this committee each year and this short period was not sufficient time to enable the members of the committee to become familiar with the enormous and complex problems presented by the medical laws of fifty states and territories, by the widely varying conditions found in the different sections of our country and the even greater differences in standards of both preliminary requirement and medical curriculum demanded and offered by more than one hundred and fifty medical schools

These committees worked under the disadvantage of having no permanent organization no permanent headquarters no permanent secretary and no appropriation without which an extensive investigation was impossible

The Council on Medical Education was created with the purpose of overcoming some of these disadvantages It is the desire to make it a permanent national bureau on medical education, with permanent headqu[illegible] with a trained clerical for[illegible] in charge of [illegible] and sta[illegible]

work which is required in order to collect and disseminate the facts in regard to the medical laws of more than fifty states, the results of examinations before more than fifty state licensing boards and the licensure each year of more than seven thousand physicians, the work of the more than one hundred and fifty schools, and we hope before long the facts in regard to the preliminary education of each matriculate in medicine

Such a national bureau on medical education can have no legal powers It can not be too often repeated that the legal power to control medical practice rests, and should always and will always rest, in the hands of the state licensing boards

THE NEED OF A NATIONAL BUREAU

Nevertheless it is clear that a national bureau of medical education is a necessity, and it is also clear that the publicity given to the evidence which such a bureau can collect may be of great service in securing needed reforms

The Council felt from the beginning that it was of the greatest importance to secure the cooperation of those most influential and most interested in the matter of medical education, and with that end in view established an annual conference on medical education at which it could present to the representatives of the state boards and all specially interested the results of its year's work and confer with them as to the best line of future action

The first annual conference was held in Chicago, April 20, 1905 At this conference the questions of preliminary educational requirement, the medical curriculum and the relation of the college of liberal arts to the medical school were discussed As a result of this conference the Council formulated an ideal standard to work for in the future and a minimum standard for the time being This last you are all familiar with It is briefly a preliminary education sufficient to enable the student to enter the freshman class of our recognized universities and the passing on this education by a state official and the graduation from an approved medical school, requiring a four year course of not less than 30 weeks, 30 hours each week, each year, and finally the passing of an examination for licensure before a state board

May 12, 1906, the second annual conference was held, at which probably the most important subject was the report of the standing of medical schools based on the showing made by their graduates before state boards The medical schools were divided into four classes Table 1, with less than 10 per cent rejections Table 2, with from 10 to 20 per cent of rejections Table 3, with more than 20 per cent of rejections, and Table 4, an unclassified list of schools which did not offer sufficient data to enable them to be classified These tables will be published each year and have, it is believed, been of much service in elevating medical standards

At the last conference an important committee was appointed, with instructions to report at this conference, the committee on the question of giving credit for subjects required in the medical curriculum taken in colleges of liberal arts Since the last conference at a meeting of the Council, it was unanimously agreed to recommend that by 1910, in addition to the preliminary education sufficient to enable the student to enter the freshman year of our recognized universities, that one year of physics, chemistry and biology and one modern language, preferably German, be required before the student can begin the study of medicine, a committee to present this important subject will report at this conference

Probably the most important work undertaken by the Council during the past year has been the personal inspection of the medical schools of the United States to ascertain the exact character of their work and the attempt to classify these schools and mark them on a civil service basis This has been a large and onerous task, the country was divided into sections and the 160 schools visited by some member of the Council or by the secretary in most instances by both the secretary and some member of the Council

This work has been we believe of much value and has enabled the Council to form a better idea of existing conditions of medical education than could be obtained in any other way The schools were marked as an individual might be in taking a civil service examination

The following ten points making a possible 100 were taken into consideration

1 Showing of graduates before state board examinations
2 Requirements and enforcement of satisfactory preliminary education
3 Character and extent of college curriculum.
4 Medical school buildings
5 Laboratory facilities and instructions
6 Dispensary facilities and instruction
7 Hospital facilities and instruction
8 Extent to which first two years are officered by men devoting entire time to teaching and evidences of original research work
9 Extent to which the school is conducted for the profit of the faculty directly or indirectly rather than teaching
10 Libraries museums charts etc.

These marks were obtained from a full report furnished by the school and also from personal inspection covering these points

We have then arranged the school into six classes A B, C, D, E and F

The A class, being from 90 to 100

The B class, being from 80 to 90

The C class, being from 70 to 80

These three classes above 70 form an accepted list and it is recommended that the state boards recognize these schools as being up to standard

The D and E class, being from 50 to 70

It is believed that these schools should be recognized, provided that they make improvements, which will bring their work up to the necessary grade of 70

The F class, being 50 and below

It is believed that these schools should not receive the recognition of the state boards

In making this inspection the Council has been exceedingly lenient in marking the poorer schools It believes that this first report should be presented to the state licensing boards and to this conference and should not be published with details at present, that a minimum standard of what shall constitute a recognized medical school be agreed on and that the schools below this standard be given a reasonable time to bring themselves up to this acceptable standard In case they do not, their standing should be published and they should no longer be recognized by the state boards

There are in this country 160 medical schools, about as many as there are in Great Britain, Germany, France and Austria combined The schools in this country represent all grades, from the very highest, as high probably as those of any country in the world, to the very lowest, a number being little better than diploma mills On this inspection we have found schools which are absolutely worthless, without any equipment for laboratory teaching, without any dispensaries, without any hospital facilities, some which are no better equipped to teach medicine than is a Turkish bath establishment or a barber shop Many of them are little more than quiz classes, in which men are drilled for the purpose of passing state board examinations Some of the schools which we inspected are conducted by men in good standing in the profession, but in about the way that schools were conducted 25 or 30 years ago, simply didactic lectures and quiz classes without any proper laboratory or clinical facilities, and some of these men apparently do not realize the very bad work they are doing in the light of modern medicine

I desire to present a few facts shown by this inspection

1 Of the 160 schools, 81 received markings above 70, 47 markings between 50 and 70, 32 below 50

2 It was clearly shown by this inspection that medical schools conducted solely for profit are a menace and should not be recognized

3 Night schools attempting to educate a student in the hours from 7 to 10 p m, usually after the student has devoted his day to some occupation in which he earns his living should not be recognized by any state board especially when it is found in the good schools that four years of nine months six days in the week from 8 a m to 5 p m is barely sufficient time to devote to a medical course

4 Many schools are conducted for the purpose of preparing a student to pass a state board examination and not with the object of making him a competent practitioner

5 A student can be prepared in a quiz class in a comparatively short course to pass a written examination before a state board and yet be absolutely ignorant of laboratory work, dispensary or hospital work and utterly incompetent to begin the practice of medicine This fact shows the necessity of inspecting the schools as to the actual character of their work of making the written examination very practical and of including a practical examination in the laboratory and possibly later on patients in the state board examination for licensure

6 The most important fact brought out in this inspection is this In this country we need money for medical education It costs more to educate a medical student than he can pay in the way of fees Medical education must secure state aid and private endowment

7 Every state university now in existence or established later should have a strong liberally supported medical department No better investment can be made by any state than the establishment and support of such a medical department Such a department at least the clinical years should be in the largest center of population in the state and in close touch with the various departments of the state board of health

8 The public must be taught the necessities and the possibilities of modern medicine and philanthropists shown that medicine well deserves the same support that has been given to theology to colleges of liberal arts, to libraries etc Philanthropists will not endow medical schools which are private corporations and conducted for profit Such schools should change their organization so that they can ask for and secure necessary endowments

9 It is in the power of the state boards and the organized profession to place American medicine on an acceptable plane

10 Already about 50 schools have agreed to require by 1910 or before one year of university physics chemistry and biology and one language as a preliminary education before matriculating in medicine

11 It is necessary to agree on a standard of what shall constitute a medical college in good standing If as a result of this conference the delegates from the state boards agree to require within a reasonable time the following standard of our medical schools we should soon place ourselves on a plane equal to that of any country in the world

(a) Preliminary education sufficient to enter the freshman class of our universities plus after a date to be agreed on one year of physics chemistry and biology and one modern language This preliminary education to be passed on by an officer selected by the state licensing board.

(b) Two years of study largely laboratory work in anatomy, physiology pharmacology and pathology in well equipped laboratories officered by trained men devoting their time to those subjects

(c) Two years of clinical work largely in dispensaries and hospitals the dispensary material in the proportion of at least 10 000 per year for 100 students in the senior class and the hospital in proportion to a daily average of 200 patients to 100 students in the senior class

(d) The curriculum and character of both laboratory and clinical work to be satisfactory to the state licensing board which shall inspect the same each year

If the state boards represented at this conference will unite to secure these requirements and notify the schools that unless they come up to this standard by a date to be agreed on that they will not be recognized we shall take the greatest step forward that has ever been made in medical education in this country What the members of this conference agree on will not be legally binding on any state board or any school but it will be of great weight because it will ultimately be agreed to by the majority of the state boards and no school can continue to exist in defiance of the rulings of any considerable number of state boards

Our inspection has shown that there are a number of schools which have no equipment to teach medicine no posible right to teach medicine nor to claim recognition It has shown that there are a number of other schools that are deficient and these should be urged to secure proper equipment and to come up to a standard sufficient to secure general recognition

This work shows the necessity of a system of annual inspection made by the state boards, possibly jointly with a committee from the Council on Medical Education, so that the results of the entire country can be compiled and furnished to each state board as an official list of colleges worthy of recognition

As a result a number of schools will consolidate, as they have already done in Kansas City, Louisville, Columbus and other cities, a number of proprietary schools which are conducted for the purpose of profit, are in fact conducted at a loss to their faculties and many of these will go out of existence

Instead of 160 schools as we now have, we should probably have less than 100 schools which could secure the general recognition of the state boards And these schools we must unite to strengthen We must secure for them state aid and private endowment, we must start an active, organized propaganda for money for medical education, we must enlist in this service the local and state medical societies, the state licensing boards, the national medical associations, individual physicians and citizens of influence and we must make these efforts permanent and continuous We must make for medicine in this country of great wealth and great population and of high average intelligence the place which it deserves

SECRETARY'S REPORT

At the conclusion of the chairman's address, the secretary of the Council, Dr N P Colwell presented a report covering the work of the past year

Mr Chairman and Gentlemen —The work of the Council on Medical Education for the past year is as follows

INSPECTION OF MEDICAL COLLEGES

In order to obtain a more accurate knowledge of conditions under which medical schools are working and of the laboratory and clinical facilities held by each college for teaching modern medicine the Council had one or more representatives visit each of the 160 medical colleges in the country This was supplemented by obtaining written reports from the colleges

In this research the Council has endeavored to treat all colleges alike, making allowances for the differences between the various schools of medicine feeling that where the college upheld proper standards of preliminary education, offered good courses in the fundamental branches of medicine and had a fair amount of clinical material the minor differences in treatment could be well ignored. Two reputable practitioners of any one school of medicine will probably differ fully as much in their methods of treatment when in actual practice as will practitioners of two different schools of medicine

In classifying the colleges every detail has been carefully studied. The size of the city where the college is located as well as any and all special conditions, such as state hospitals etc whereby clinical material is made available were inquired into The college buildings were considered with regard to their number size condition arrangement proximity and utility Hospitals were also considered careful note being made of the number of beds the extent to which students have access its proximity to and control by the college Dispensaries have received proper attention—note being made in regard to the rooms equipment number of patients, number of visits use of by the students and nearness to the college Each subject of the college curriculum was individually studied—for the fundamental branches note being made of the size and equipment of laboratories the presence of paid teachers devoting their entire time to instruction and research and for the clinical branches the amount and variety of clinical material available to teach the subject under consideration

The supply of charts models and microscopes were particularly inquired into and at the same time the size of the classes needing to use them Careful notes regarding the medical library and the museum were made together with [illegible] accessibility and usefulness for teaching Careful [illegible] was made in regard to the [illegible] requirements [illegible] character and extent of the college curriculum and [illegible] of teaching of each college The [illegible] were noted and inquiry was [illegible] the future [illegible] of each school The [illegible]

each college before state examining boards was naturally taken account of College announcements were carefully reviewed and a careful comparison made with the facts learned from the actual inspection The character of the men composing the college faculty was considered, every evidence of activity was noted and due credit given where good, honest work was being done In fact, care was taken to get every fact available that would give an accurate knowledge of what each college was and the kind of work it was doing

In order to properly credit each school the data collected was grouped under ten different heads, these being so selected that they might have equal weight and, therefore, be marked on the scale of 100 An average taken then represented the standing of the school The ten heads are as follows (1) The successes of graduates of the school before state examining boards, (2) the question of requirement and enforcement of satisfactory preliminary education, (3) the general character and extent of college curriculum, (4) the medical school buildings (5) laboratory facilities and instruction, (6) dispensary facilities and instruction, (7) hospital facilities and instruction, (8) extent to which the first two years are officered by men devoting their entire time to teaching and the evidences of original research, (9) extent to which the school is conducted as an institution for teaching medicine, rather than as a means for the profit of the faculty, directly or indirectly, and (10) the owning of a library, museum, charts, models stereopticons etc The result from this research is as follows Of the 160 schools, 81 or 50 6 per cent, were above 70, 47, or 20 per cent, were between 50 and 70, while 32, or 19 6 per cent, were below 50

STATE BOARD EXAMINATIONS

A year ago at our conference a classification of the medical schools was made based on the state board examinations for 1904 It will be remembered that 47 schools received less than 10 per cent of failures, 27 were between 10 and 20 per cent, and 38 had more than 20 per cent There were 37 schools in regard to which there was insufficient data to permit of classification

With the report of the state board examinations for 1905, which was published in THE JOURNAL of the American Medical Association, Aug 25, 1906, another classification was made resulting in 45 schools having less than 10 per cent. of failures, 22 schools with between 10 and 20 per cent, and 40 schools above 20 per cent There were 46 schools in the unclassified list

By adding together the figures for 1904 and 1905, we get sufficient data to reduce the unclassified list to eight colleges, thus allowing us to classify 135 schools on the basis of state board examinations The result has been 41 schools having less than 10 per cent of failures, 40 schools having between 10 and 20 per cent and 54 schools having over 20 per cent

	Less than 10	10 to 20	Above 20	Unclassified	Total
1904	47	27	38	37	149
1905	45	22	40	46	153
1904 5	41	40	54	8	143

For the years 1904 and 1905 the colleges can be further subdivided as follows, omitting the eight unclassified

Less than 10 per cent of failures	41
Between 10 and 20 per cent	40
Between 20 and 30 per cent	16
Between 30 and 40 per cent	19
Above 40 per cent of failures	19
	135

COLLEGES HAVING LESS THAN 10 PER CENT OF FAILURES

ALABAMA	
Birmingham Medical College	0
CALIFORNIA	
University of California	6 8
COLORADO	
Denver Homeopathic College	0
Colorado School of Medicine	0
CONNECTICUT	
Yale University Medical Department	2 9
GEORGIA	
University of Georgia	2 9
ILLINOIS	
College of Physicians and Surgeons Chicago	7 9
Northwestern University Chicago	3 4
Rush Medical College	7 1
Dearborn Medical College	2 1
IOWA	
Sioux City College of Medicine	8 8
State University of Iowa Homeopathic	7 7
LOUISIANA	
Tulane University of Louisiana	9 5
MAINE	
Medical School of Maine	8 9
MARYLAND	
Johns Hopkins University Medical School	0 8
Woman s Medical College Baltimore	0
MASSACHUSETTS	
Boston University School of Medicine	7 3
Harvard University	1 5
MICHIGAN	
University of Michigan Homeopathic Department	5 9
MINNESOTA	
University of Minnesota Department of Medicine	7 0
MISSOURI	
University of Missouri	6 2
NEBRASKA	
Creighton Medical College Omaha	7 4
NEW HAMPSHIRE	
Dartmouth Medical College	9 1
NEW YORK	
Albany Medical College	4 7
College of Physicians and Surgeons New York	3 9
Cornell University	1 4
Long Island College Hospital	7 8
New York Homeopathic Medical College	5 1
New York Women's Medical College	9 5
Syracuse University	1 4
University of Buffalo	4 6
NORTH CAROLINA	
University of North Carolina, Raleigh	7 7
OHIO	
Western Reserve University Cleveland	7 7
Cleveland College of Physicians and Surgeons	5 7
Medical College of Ohio	8 7
PENNSYLVANIA	
University of Pennsylvania	5 8
Hahnemann Medical College Philadelphia	3 6
Jefferson Medical College	8.8
Woman s Medical College Philadelphia	6 6
TEXAS	
University of Texas	0
VIRGINIA	
University of Virginia	8 2

COLLEGES HAVING BETWEEN 10 AND 20 PER CENT OF FAILURES

ALABAMA	
Medical College of Alabama, Mobile	11 5
CALIFORNIA	
Cooper Medical College San Francisco	14 3
COLORADO	
Denver and Gross Medical College	12.5
DISTRICT OF COLUMBIA	
George Washington University Washington D C	10 9
Georgetown University Washington, D C	15 8
GEORGIA	
Atlanta College of Physicians and Surgeons	17 2
ILLINOIS	
American Medical Missionary College Chicago	11 8
Bennett College of Eclectic Medicine and Surgery Chicago	15.8
Hahnemann Medical College Chicago	11.[illegible]
Hering Medical College Chicago	1[illegible]
National Medical University Chicago	18 6
American College of Medicine and Surgery Chicago	14 5
INDIANA	
Indiana Medical College	16 3
IOWA	
Drake University College of Medicine Des Moines	1[illegible] 1
State University of Iowa Medical Department	10 4
KANSAS	
Kansas Medical College, Topeka	17 1
MASSACHUSETTS	
Tufts Medical College Boston	11 7
MICHIGAN	
Detroit College of Medicine	13.3
University of Michigan Medical Department	11 0
MINNESOTA	
University of Minnesota Homeopathic Department	16 7
MISSOURI	
St Louis University	15 1
St Louis College of Physicians and Surgeons	18 9
Washington University St Louis	15 1
NEBRASKA	
University of Nebraska Omaha	16 3
NEW YORK	
Eclectic Medical College New York	11 1
University and Bellevue Medical College New York	12 6
NORTH CAROLINA	
North Carolina Medical College Charlotte	18 0
OHIO	
Miami Medical College Cincinnati	11 5
Ohio Medical University Columbus	17 7
Starling Medical College	19 8
PENNSYLVANIA	
Medico-Chirurgical College Philadelphia	18 5
Western Pennsylvania Medical College	1[illegible] 7

South Carolina	
Medical College of South Carolina Charleston	15 0
Tennessee	
University of Nashville	17 1
Vanderbilt University, Nashville	11 4
Texas	
Fort Worth University Ft. Worth, Texas	12 5
Vermont	
University of Vermont	15 4
Virginia	
Medical College of Virginia Richmond	14 7
University College of Medicine Richmond	10 3
Wisconsin	
Milwaukee Medical College	14 3

COLLEGES HAVING BETWEEN 20 AND 30 PER CENT OF FAILURES

California	
Hahnemann Medical College San Francisco	25 0
Georgia	
Georgia College of Eclectic Medicine and Surgery Atlanta	28 0
Illinois	
Illinois Medical College Chicago	25 0
Jenner Medical College Chicago	20 0
Indiana	
Eclectic Medical College of Indiana	22 2
Iowa	
Keokuk Medical College College of Physicians and Surgeons	25 7
Maryland	
Baltimore Medical College	28 8
College of Physicians and Surgeons Baltimore	22 0
Southern Homeopathic Medical College Baltimore	21 1
University of Maryland Baltimore	24 8
Missouri	
University Medical College Kansas City	25 0
Nebraska	
Lincoln Medical College Nebraska	24 6
Ohio	
Cleveland Homeopathic Medical College Ohio	20 6
Eclectic Medical Institute Cincinnati	28 1
Toledo Medical College	25 0
Wisconsin	
Wisconsin College of Physicians and Surgeons	22 7

COLLEGES HAVING BETWEEN 30 AND 40 PER CENT OF FAILURES

Arkansas	
University of Arkansas	33 3
California	
University of Southern California	31 1
District of Columbia	
Howard University Washington D C	34 2
Kentucky	
Kentucky School of Medicine	36 1
Louisville Medical College	32 9
University of Louisville	35 9
Kentucky University Louisville	37 3
Massachusetts	
College of Physicians and Surgeons, Boston	36 5
Michigan	
Michigan College of Medicine and Surgery	33 3
Missouri	
Kansas City Hahnemann Medical College	38 5
Eclectic Medical University Kansas City	33 3
Barnes Medical College St Louis	32 6
Homeopathic Medical College of Missouri	36 3
Ohio	
Pulte Medical College Cincinnati	39 1
Oregon	
University of Oregon Portland Ore	34 5
Willamette University Salem, Ore	30 4
Tennessee	
Tennessee Medical College Knoxville	34 4
Meharry Medical College Nashville	37 5
Memphis Hospital Medical College	36 4

COLLEGES HAVING ABOVE 40 PER CENT OF FAILURES

California	
California Medical College	61 1
College of Physicians and Surgeons San Francisco	41 3
Illinois	
College of Medicine and Surgery Chicago	44 1
Indiana	
Physio Medical Medical College of Indiana	47 1
Kentucky	
Hospital College of Medicine Louisville	45 8
Louisiana	
Flint Medical College New Orleans	66 7
Maryland	
Baltimore University School of Medicine	67 8
Maryland Medical College	47 8
Minnesota	
Hamline University Minneapolis	40 0
Missouri	
Ensworth Central Medical College St Joseph	45 [illegible]
American Medical College St Louis	44 4
North Carolina	
Leonard Medical College Raleigh N C	58 7
Tennessee	
Knoxville Medical College	90 0
University of Tennessee Nashville	4[illegible] 0
University of the South Sewanee, Tenn	48 8
Chattanooga Medical College	40 9
University of West Tennessee	60 0
Texas	
Baylor University Dallas Texas	44 4
Gate City Medical College Texarkana Texas	60 0

As has long been recognized, the weakest part of our system of medical education to day is the low standard of preliminary requirements There was a time, doubtless, when low standards were excusable, but now when we consider the large number of schools and colleges which offer abundant opportunities to any one who has ambition enough to secure a liberal education whether he has ready money or not there is scarcely any excuse for not requiring a fair standard of preliminary education There are still a number of schools where no attention apparently is paid to the students' entrance qualifications

The weakest point in the equipment and teaching facilities of medical schools is, naturally the lack of laboratories and equipment for the work of the first two years of the medical course or as they are often called, the fundamental branches The need of good, well equipped laboratories, as well as having them officered by trained instructors paid to devote their entire time to teaching and research naturally makes this part of the medical course the most expensive The teaching of the fundamental branches does not carry the advantage to the practicing physician which is found with the clinical branches, therefore it is difficult to get good men to devote their time to these branches unless they are paid definite salaries A few schools were found which were weak in this part of the course although strong in clinical facilities

Some schools are not developing the college dispensary as they might Where good quarters have been provided for this department and good men placed on the attending staff, a larger attendance is invariably the result Some schools situated in large cities, where ample clinical material could be had are failing to take advantage of it Others with abundant means at their disposal lack the activity in modern teaching and research which they might have

Of course the medical schools need money and all degrees of such need are to be seen Many schools are dependent solely on the fees of the students to cover the teaching expenses Some are keeping the teaching expenses within the amount received and are therefore quite deficient in equipment and facilities for teaching modern medicine Some schools however which although practically depending on students fees are manned by faculties who not only spend their time and energy in teaching without pay but have stood by the school with a devotion most praiseworthy, this being an encouraging fact in medical teaching of to-day The development of some of these schools even with the small amount received from students fees has been remarkable Some have fixed high standards and held to them even though these standards have reduced the number of students and thereby reduced the financial income of the school

The past few years has witnessed the expenditure of a large amount of money for medical education New buildings with spacious laboratories and elaborate equipment were to be seen in all sections of the country Medical education is beginning to attract the attention of men of wealth to its needs and endowments will follow sooner or later State legislatures are more readily making appropriations for the development of the medical departments of state universities From the financial point of view there is reason to believe that a new era is dawning for medical education

A few important mergers have taken place during the past few months—at Louisville Ky where four schools merged into two, and at Columbus, Ohio, where the two colleges merged into one Combinations at two or three other points also are in prospect There are still other places where much better medical education could be given if two or more schools would join hands thereby creating one strong school from two or more weaker ones

The work of the Council in an effort to secure the adoption of the standards recommended by the American Medical As o

ciation has had gratifying results During the latter part of last June a letter was sent to each medical school of the country clearly stating that portion of the American Medical Association s ideal standard relating to the preliminary year in physics, chemistry, biology and languages, and asking whether the faculty of the school would be willing to adopt this as a requirement to apply to all students entering after Jan 1 1910 At that time only seven colleges in the country were requiring one or more years of work in a college of arts for admission There are now 46 medical schools, which either already require one or more years of work in a college of arts or have voted to require this preliminary year in physics chemistry, biology and languages by Jan 1, 1910 There are at least 10 other colleges still to be heard from which will probably make the same requirement Of the 46 schools named at least 19 colleges have already voted to require at least two years of preliminary work in a college of arts, and 8 others intend to make two years their minimum requirement, although the date for the requirement of the second year has not been definitely determined On the list are to be found a few weak schools, but the great majority are those which can be fully depended on to live up to their requirements

YEARS IN A COLLEGE OF ARTS REQUIRED FOR ENTRANCE

The following medical colleges either already require as a prerequisite to the study of medicine, in addition to a four year high school education or its equivalent, one or more years in a college of liberal arts, or have adopted the requirement of a preliminary year to include the subjects of physics chemistry biology and one language, to become effective on or before Jan 1 1910

	Years	In force
CALIFORNIA		
University of California	2	Now
Coll of Physicians and Surgeons San Francisco	1	1910
Oakland College of Medicine and Surgery	1	1910
CONNECTICUT		
Yale Medical School	2	1909 10
DISTRICT OF COLUMBIA		
George Washington University	2	1909-10
Georgetown University	1	1910
ILLINOIS		
Rush Medical College	2	Now
Northwestern University Medical School	2	1909 10
American Medical Missionary College	1	1909 10
American Medical Missionary College	2	1910 11
College of Medicine and Surgery	1	1910
Jenner Medical College	1	1910
Illinois Medical College	1	1910
American College of Medicine and Surgery	1	1910
IOWA		
Drake University Medical Department	2	1910
Sioux City College of Medicine	1	1910
INDIANA		
Indiana University Medical School	1	1910
State College of Physicians and Surgeons	1	1910
KANSAS		
University of Kansas Medical School	1	1908 09
University of Kansas Medical School	2	1909-10
Kansas Medical College	1	1910
MARYLAND		
Johns Hopkins Medical School	Degree	Now
College of Physicians and Surgeons Baltimore	1	1910
MASSACHUSETTS		
Harvard University Medical School	Degree	Now
College of Physicians and Surgeons Boston	1	1910
MICHIGAN		
University of Michigan (R)	2	1909
MINNESOTA		
University of Minnesota (I)	2	1907 08
University of Minnesota (II)	2	1907 08
MISSISSIPPI		
University of Mississippi Medical Department	1	1910
MISSOURI		
University of Missouri	1	Now
St Louis University Medical Department	1	1910
Washington University Medical Department	1	1910
NEBRASKA		
University of Nebraska School of Medicine	1	1909
NEW YORK		
College of Physicians and Surgeons New York	1	Now
NORTH CAROLINA		
University of North Carolina	1	1909
Wake Forest School of Medicine	2	1908-09
NORTH DAKOTA		
University of North Dakota	2	Now
OHIO		
Medical College of Ohio	1	1910
Western Reserve University	2	Now
Cleveland College of Physicians and Surgeons	1	1910
Cleveland Homeopathic Medical College	1	1910
Miami Medical College	1	1910
OKLAHOMA		
University of Oklahoma	1	1910
PENNSYLVANIA		
University of Pennsylvania	1	1910-09
University of Pennsylvania	2	1910 11
TENNESSEE		
University of Tennessee	1	1910
TEXAS		
University of Texas	1	1909
UTAH		
University of Utah Medical Department	1	1909 10
University of Utah Medical Department	2	1910-11
VIRGINIA		
University of Virginia	2	1910

Practically all these schools have expressed their intention to require that the year in physics, chemistry and biology be taken in a college of arts

LAWS GOVERNING MEDICAL PRACTICE

The progress toward securing high standards in the various states through the activity of the examining boards has been very encouraging Many states have secured new laws or important amendments, resulting in more uniform and higher standards A year ago 13 states still allowed non graduates to obtain the license to practice medicine Of that number the examining boards of two of these states, Oregon and Hawaii have recently established the graduation requirement by board rulings, being legally authorized to do so Of the other eleven states, however, amendments to the state laws were necessary Efforts have been made to secure these amendments by practically all, resulting successfully in Colorado Missouri New Mexico, Tennessee, Texas and West Virginia The number of states allowing non graduates to secure license has, therefore, been reduced to 5, these being Alabama, Arkansas, Massachusetts, Mississippi and Rhode Island A report received is most favorable that the amendment will be secured in Alabama

Delaware secured an amendment requiring that applicants must have had four years of study in a recognized medical school leaving only one state, Georgia, which only provides for a three year course Two states, Illinois and Minnesota, have raised the standard of preliminary education above that of a four year high school education After Jan 1, 1910 Illinois will require that all students matriculating in medicine must have had one year of nine months to be devoted to the study of physics chemistry biology and one language Minnesota has secured an amendment to their law requiring hereafter that all matriculants in medicine must have at least two years of work in a college of liberal arts One other state, Connecticut is trying to obtain requirements in addition to the four year high school education Similar action on the part of other state boards will hasten the time when the standards of medical education in this country will be as high as those of other leading nations The requirement of an additional year of preliminary education by state examining boards will be an added encouragement to the 45 colleges which of their own volition have adopted this standard

Greatly improved medical practice acts or important amendments have been secured recently in California Delaware, Minnesota, Missouri, New Mexico, Tennessee, Texas, Utah, Vermont West Virginia, Wisconsin and possibly in other states which have not been reported to us Reports show that new practice acts or amendments are being urged in Alabama, Colorado, Connecticut, Michigan Ohio, Pennsylvania and New York with promise of success in the majority of cases Important board rulings have been voted by a number of state boards at least in Colorado Oregon Hawaii, Illinois Michigan Minnesota and New Hampshire Probably no time has ever witnessed so widespread an effort for better laws The tendency is rapid toward more uniform and higher standards

BOOK OF LAWS

The changes in medical practice acts will be carefully followed up and published in the Book of Laws, a new edition of which is issued about every four months Registration requirements in foreign lands, as well as standards of medical education are also being given in this book so far as they can be ob

tained Reports for all changes of the past few months have probably not been received, therefore, we particularly request of the examining boards that notice be sent us of any changes or additions to the laws as presented in this book

RECIPROCITY

At the last session of the American Medical Association in Boston the work formerly devolving on the Committee on Reciprocity was turned over to the Council on Medical Education Since the extension of reciprocity depends so much on the securing of equally high standards of medical education and licensure, the Council has bent its energies chiefly to obtain such standards, merely watching and noting the progress of the reciprocity movement In practically all of the new practice acts secured during the past year and in a number of amendments reciprocity has been provided for On the whole, the justice of reciprocity is being recognized and the movement favoring it is spreading Statements showing any licenses issued under the reciprocity clause have been received from 21 different states No statement has been obtained from New Jersey The list of states and number so licensed in each is as follows

Delaware	5	Nebraska	56
District of Columbia	11	New York	11
Georgia	6	North Dakota	21
Illinois	43	Ohio	6
Indiana	21	South Carolina	4
Iowa	69	South Dakota	29
Kansas	56	Texas	8
Kentucky	2	Vermont	4
Maryland	9	Virginia	10
Michigan	61	Wisconsin	61
Minnesota	42		

Or a total of 529 A table which shows at a glance just what states reciprocate and on what basis is published regularly in the Book of Laws and revised with each edition of that book (See Laws, pages 115 116 and table)

WORK OF STATE COMMITTEES

State committees on medical education have now been appointed in 45 states, or in all states except Alabama, Arkansas Nevada South Carolina, Tennessee and Georgia These committees have done good work in several instances, having studied local conditions extensively and made splendid reports to their state associations Particularly was this true in Illinois Louisiana, Maryland Minnesota, Missouri New York Texas Virginia and West Virginia Doubtless other committees have been active also but have not reported to us

Through these committees it is hoped that each state medical society will be kept fully informed as to how the standards in their own state compare with the standards throughout the country These committees can do much to help secure the adoption of the American Medical Association standards in all states by securing for the state examining boards the solid backing of the state medical societies

In conclusion, the work of the Council for the past year may be briefly outlined as follows

(a) Collecting, tabulating and publishing the results of state board examinations showing the successes and failures of the graduates of the various medical colleges

(b) Securing, tabulating and publishing statistics regarding medical students and medical graduates in the United States

(c) Compiling and publishing abstracts of laws and board rulings governing medical licensure in the United States

(d) Cooperation with state examining boards, state committees on medical education and with medical colleges in an effort to secure the adoption of the standard of medical education adopted by the American Medical Association

(e) Collecting of more accurate information regarding medical colleges and their surroundings particularly concerning the seat history, buildings hospitals laboratories dispensaries equipment college year etc This was obtained by securing reports as well as by a systematic inspection of the colleges

(f) Keeping informed regarding proposed changes in medical practice acts and rendering any assistance possible for the obtaining of advance legislation

(g) Keeping informed regarding reciprocity and securing from the examining boards reports of licenses issued on that basis

(h) Collecting from all available sources information bearing on medical education and furnishing it wherever it might be of service Much has been published in the department of THE JOURNAL, entitled Medical Education and State Boards of Registration

N P COLWELL *Secretary*

(To be continued)

AMERICAN GYNECOLOGICAL SOCIETY

Thirty second Annual Meeting, held at Washington, D C, May 7 9, 1907

The President, DR CLEMENT CLEVELAND, New York, in the Chair

Officers Elected.

The following officers were elected to serve during the ensuing year President Dr J Montgomery Baldy, Philadelphia, vice presidents, Drs J S Stone, Washington D C and Malcolm McLean, New York, treasurer, Dr Charles P Noble Philadelphia, secretary, Dr J Riddle Goffe, New York (re elected)

The next meeting will be held in Philadelphia on the fourth Tuesday in May, 1908

Metastatic Carcinoma of Tube and Ovary in Cancer of Cervix Uteri

DR FRED J TAUSSIG, St Louis, said that mild chronic, inflammatory conditions of the tube and ovary are frequently met in cancer of the cervix Whether this is merely a coincidence or not he is unwilling to say On the other hand cancerous metastases in these organs are extremely rare in cervical cancer In fact, he can find no record of such metastasis in an operable case In carcinoma of the body of the uterus, however they are not infrequently seen in tube or ovary, or both Hence it seems logical to advise the removal of both tubes and ovaries in every case of cancer of the body If, however the patient is still five or ten years from the time of the menopause, and the site of the tumor be in the cervix, the saving of one ovary is attended with practically no risk to the patient and may relieve her of the disagreeable symptoms of the premature menopause Since this can be done without interfering with the complete removal of the lymphatics directly tributary to the cervix, he believes it logical to leave one ovary or a portion of one ovary, in every operation for cervical cancer in a woman under 40 years of age

DISCUSSION

DR J WESLEY BOVÉE, Washington, D C said metastases in cancer of the uterus are by no means common and that, as the disease spreads, metastases occur This emphasizes the fact that in the case brought to the attention of the gynecologist he is helpless in the treatment of cancer of the uterus, that in the cases in which the conditions ordinarily offer great hope of success we will find that metastases occur in these structures which are not removed, the result being that cancer recurs or continues unsuspected At best, the treatment of cancer of the uterus is not hopeful notwithstanding the claims of radiographers and the demonstrators of radium, etc, and those who do the most radical surgical operations He is not prepared in the present light of the surgery of cancer of the uterus to accept the suggestion of the essayist that it is safe to leave a portion or even one ovary in extirpating a cancer of the uterus His own conviction is that the operation should be as radical as it can be consistent with saving the life of the patient

DR LAPTHORN SMITH Montreal reported a case of cancer of the cervix in which operation was done early by another surgeon with every possibility of a complete recovery of the patient yet this woman came to him a year later with two distinct masses in the ovaries which could be felt readily He considered it too late to operate This case made such an impression on him that ever since, when doing vaginal hyster

ectomy, he always removes the tubes and ovaries He does not think it safe to leave an ovary or a piece of an ovary, when there is such a tremendous risk of recurrence

DR. REUBEN PETERSON, Ann Arbor, Mich, agreed with Dr Boyce against leaving one ovary or a part of one ovary in the operation for cancer of the uterus This is a step backward, and is not in accordance with progress that has been made in the last ten years in the treatment of cancer of the uterus He is not convinced that the leaving in of one ovary, after the removal of the uterus, helps the patient so far as the menopausal changes are concerned He has been unable to see much, if any, difference where an ovary has been left in, and where it has been removed, after the removal of the uterus for cancer

DR WALTER M CHIPMAN, Montreal, doubts whether it is a wise thing to leave even one ovary, or even a part of one, after the removal of the uterus for cancer, no matter where the cancer is situated While it is true that the ovary is not in the direct path of the lymphatic distribution of the pelvis, yet so great and so rich is the anastomosis that he thinks the leaving in of ovaries must always be risky

DR FAUSSIG said he anticipated that most of the speakers would disagree with him as to the advisability of leaving a portion of an ovary in the class of cases he discussed but he believes that this procedure is not at all unsafe, and it seems to him that it is just as logical to advise the removal of the appendix as it is to advise the removal of the other ovary The appendix is a useless organ, the ovary—at least, in the opinion of some—helps to make the menopausal disturbances less severe in women under 40 years of age, if left

(To be continued)

THE MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA

Meeting held April 12, 1907

The President ADOLPH FICHOLTZ Esq in the Chair

The Pathogeny of Crime

DR ARNOLD LORAND, Carlsbad, in his recent lecture before this society took high ground and made a number of statements likely to provoke deep interest in all circles where it is common to face truth and find remedy for evil rather than shirk the real and weakly accept the coward dictum that whatever is is right Broadly speaking, Dr Lorand held that the two barriers protecting the individual against crime or a criminal career are in active and free will power guided by a sound reasoning power To see right and to be able to do it to recognize wrong and have power to refrain from its practice here is the heart of his pathogeny of crime And this position he justifies in the following way When a man has free will power he is able to control his passions, when possessed of sound reason he can distinguish between right and wrong

The operation of the thyroid gland plays an important part in the pathogeny of crime When the thyroid is removed there is a resulting effect on the nervous system Mentality undergoes a change In myxedema there is found melancholia In myxedema there is not free will power and the reason is not perfect Moreover, these persons have delusions of persecution Insanity and criminality stand in close relation, the difference being only one of degree In exophthalmic goiter where a condition of exaltation bordering on insanity is found there are often symptoms of hysteria and neurasthenia Hysteria stands in close relation to criminality Chloroform also excites the function of the thyroid gland Alcohol, too acts on the thyroid gland, producing increased activity with a condition like drunkenness Further he said that infectious diseases bring about an alteration of the thyroid gland and through such alteration a condition parallel to that underlying insanity and criminal acts may occur Reference was made to the well known fact that the sexual glands and the thyroid gland stand in close relation Each time the sexual glands are altered the thyroid gland is also altered In puberty this is evidenced by the swelling of the thyroid gland, with consequent alterations of mentality This has been illustrated by the wandering away from home of young girls Then, too, alterations in mentality are noted during pregnancy, bringing to pass a weakening of the will and a diminution of the reasoning power Here it was noted that injection of the extract of the ovaries or testicles acts as a toxic product, further, that castration in man produces melancholia, that after castration in women nervous symptoms invariably take place This was considered important to bear in mind because in deciding whether a woman has committed criminal action the question must always be considered whether she has been in physiologic or a pathologic condition Reference was made to a case of kleptomania in a woman who was naturally honest, but every time she was pregnant she would steal. Dr Lorand said that he would not put such a woman in jail

After every hyperactivity of the sexual glands there is exhaustion In the interest of the procreation of the race virtue is a necessity in woman Hysteria was said to be a condition found in connection with alteration of the sexual glands In man the testicle plays as great a rôle as the ovaries in woman This is shown in the mentality of the eunuchs No eunuch was ever a great man In old age are seen senility and avarice

Most courts in Europe, it was said accept responsibility before the law only when puberty is established The conception of right and wrong is not the same in a person of 16 or 18, because the testicles are not descended Dementia præcox is a condition in which crime can be committed easily

Attention was called to the fact that there is such a thing as exposure to crime by imitation Experiments show that monkeys, apes and men imitate because they do not know by reasoning whether an act is right or wrong The suggestion is made that one barrier against crime is to prevent the children from attending cinematograph shows, for it is a well known circumstance that children born of parents who are hysterical or neurasthenic when they see criminal acts are inclined to commit them Of 173 persons in France who had been beheaded only 2 had not seen an execution

There is no doubt of the importance of the part played by the ductless glands in insanity, and, coincidently, in crime Therefore, alterations of the ductless glands should be inhibited If the thyroid glands of the parents are altered, the thyroid glands of their children will be altered, too that is, be differentiated from the normal It should not be forgotten that in alcoholism there is degeneration of the thyroid gland, also in syphilis and other infectious diseases and that the children of such persons must reap the harvest either in the form of thyroid degeneration or congenital atrophy of the thyroid gland

Another fact of the first importance is that crime is most common among children of alcoholic and syphilitic persons because these children are born in a condition of congenital myxedema and are lacking reason and will power Dr Lorand thought that all would agree to the proposition that it is best for the state to take children of criminals away from home and put them into schools where they will be educated at the expense of the government This would be true economy for it will cost far more to allow such children to grow up criminals and for years to occupy our jails While education is a preventive of crime, hand in hand with education must go a realization of the necessity of aid from religion and from reason Religion is, and must be the basis of every government and every state Without religion a country can not stand a criminal court is not sufficient it is only a restorative or corrective, it is never a creative force Education is a necessity because the educated man will reason himself into a belief in the wisdom of obedience Obedience will teach exercise of will power

Criminality appears to be larger in the United States than anywhere abroad because lack of self control is a national characteristic and there are here few aids to self control few public lessons in the habit of obedience Lacking enforced military service the young men do not have the training and discipline enjoyed by the men of Europe The young man is not taught to subject his own will to the will of others Sons

of the wealthy class are chronic idlers, they run naturally to sexual excess, there follow, inevitably, alterations of mentality

As to the mental condition "dementia Americana," Dr Lorand does not admit its existence The condition suggested he would term "dementia plutocratica" This condition, however, he declares, is not essentially American. It is only more common in America because America is richer than other nations

In his opinion, specialists in neurology should be constantly in the service of the government In difficult cases there should be a third man It should be remembered that the highest wisdom suggests that in the treatment of criminals the questions be asked, Is punishment the real treatment of disease? What are the purposes of punishment? The first purpose is the protection of society All are agreed that vengeance should not be the sole guide Dr Lorand suggested to put criminals in a colony where they can be taught to raise cattle, chickens, flowers and vegetables This would be a wiser policy, and would better safeguard the state than to imprison them, for when such a term of detention has expired the men come out with no taint on them, and they can be made useful members of society

To sum up the situation, excess or deficit in working power of the thyroid gland or other ductless glands may develop into an abnormal condition which makes inevitably toward insanity, insanity makes, by normal progress, through advancing forms of the imagination coincident with a weakening of the will, toward crime, crime makes for the destruction of the state and the end of civilization It would thus appear that the safety of society rests on the maintenance of normal conditions in this gland which is so potent in its influence on the moral as well as the physical life of the individual. In short, crime has a basis in a physical fault, the correction of crime is to be sought in the correction of this physical fault rather than in venegeful or isolating forms of punishment inflicted by a hard and fast rule on the individual criminal. Sanity and virtue are synonymous terms—insanity and crime interchangeable synonyms

DR. CHARLES DEM SAJOUS agreed with the views of Dr Lorand, believing that in his presentation of the subject there are the fundamental principles of a proper, fair and just interpretation of many conditions confronting the courts He feels that the ends of justice would be served if many of those tried by courts of justice were examined physically and treated according to the findings

DR. F X. DERCUM agreed with the general trend of Dr Lorand's address He feels that the present attitude toward crime is the same as that toward the insane something over a hundred years ago If the laws could accept the idea of lessened responsibility and deal with crime in accordance with that, he sees that a great step in advance would be made He agrees with Dr Lorand that crime should be dealt with from the standpoint of treating the criminal, and that little or nothing can be accomplished by confining him for a given number of months without occupation He should be put under conditions in keeping with simple physiologic living Segregation should not be for months or years, but should be dependent on the change in condition. This he regards as the humane view, and expresses the opinion that there will be a change in the oversight of the criminal quite as radical as that seen in the care of the insane

DR. ALFRED GORDON felt that Dr Lorand's ideas were based on scientific principles and deep scientific knowledge He agreed with Dr Lorand in the majority of his propositions In the matter of medicolegal testimony, his ideas are absolutely identical with those of Dr Lorand A case was cited in which in giving expert testimony he had not been allowed to enter into the details which, in his opinion, lessened the man's responsibility He believes that if a man is considered an expert, he should be allowed to submit to the judge and jury details of family history and matters of medical knowledge He believes that the end of justice should be not alone to prosecute the criminal, but to study him for the purpose of preventing crime

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Semi Centennial Celebration of Its Founding, held May 9 11, 1907

The President, DR W M L COPLIN, in the Chair

The Pathological Society of Philadelphia commemorated the fiftieth anniversary of its founding May 10 and 11, 1907 Exhibition meetings began Thursday evening, May 9, and were continued until Saturday, May 11 The formal exercises were opened by the president, Dr W M L. Coplin of Jefferson Medical College in the Mütter Museum, College of Physicians, at 10 a m, May 10, when the society went into scientific session

The Rôle of Protozoa in Pathology

DR. FREDERICK G NOVY, Ann Arbor, Mich, gave a history of the advances made in the study of protozoal diseases and called attention to the difficulties in determining their etiologic factors The etiologic relationship of amebas to disease is well established, and Novy stated that their division into a pathogenic and non pathogenic group is unwise, especially in the tropics, where the only safe hypothesis to adopt is that all amebas are or may become pathogenic Trypanosomal infections, he pointed out, are to be met perhaps in all parts of the world, and they have been found in so many forms of animal life that it seems as if no type of vertebrate is exempt The experiments in regard to the relative behavior of trypanosomes and of spirochetes to a given anilin dye can not in Novy's opinion, be accepted unreservedly as a means of differentiating species The discovery of a trypanosome in patients ill with sleeping sickness he holds to be most important and the experiments being carried on in Central Africa by Koch on the treatment of injections of anilin compounds is to be awaited with interest Spirochetes, the speaker believes, belong in a group by the side of bacteria, and more especially the spirilla, stating that it is impossible to trace a sharp dividing line between the protophytes and protozoas, and that one must be guided by the different relationship to recognized types In the supposed protozoal diseases, namely—cancer, smallpox scarlet fever, measles, yellow fever, rabies and Rocky Mountain fever, Novy urges more exhaustive work along physiologic chemical and biologic lines unless the crucial test, that of artificial cultivation, is first realized, since morphology alone seems powerless to overcome the *impasse* in which seemingly we find ourselves to day The mode of transmission of this group of diseases is for the most part by insects, though in some of the lower animals infection has taken place through an apparently uninjured mucous membrane. Novy believes that the insects are not only passive but active carriers of both bacteria and the protozoa, and hence the transmission of certain spirochetal diseases by ticks does not afford a serious argument against the bacterial nature of the spirochetes, and the similar rôle of stegomyia in the transmission of yellow fever does not necessarily imply protozoal organisms He considers the evidence as being suggestive of a spirochete cause

The Dynamic Point of View in Pathology

DR A E TAYLOR, San Francisco, made a plea for a more rational and scientific viewpoint of pathology He considered pathology under three headings Etiology, of predominant importance from the point of view of preventive medicine and a subject to which too great importance can not be attached in teaching and investigation, morbid physiology, the doctrine of the *modus operandi* of disease, and morbid anatomy, the doctrine of histologic lesions He pointed out that the last subject has until recently greatly overshadowed the first and continues to overshadow the second, particularly in the teaching of pathology and thus secondarily in the minds of the profession He considers this disproportionate predominance accorded to the visible lesions of disease out of all proper perspection and proportion and constitutes a bar to the development of the point of view of morbid physiology in clinical medicine This position he attributes to the fact that physiology was for a long time largely a descriptive science mainly because the majority of physiologists were offshoots from anatomy At the present time too emp not be laid on the importance of the physiologic

chemistry to influence pathology in the direction of the dynamic point of view In regard to practical medicine, he very aptly pointed out the importance of the dynamic point of view in research in pathology by calling attention to our knowledge of two diseases, nephritis and diabetes He showed how in nephritis the localization of the lesion has been known from the beginning, while for diabetes none has until recent times been known, yet, we to day know much more about the actual morbid functionation in diabetes than we do in nephritis

The Newer Pathology

DR SIMON FLEXNER, of Rockefeller Institute New York, believes that while a study of the anatomical changes introduced in cells by disease has not been exhausted and each year adds valuable stores to our knowledge of the pathologic changes underlying diseased processes, yet the most significant advances are being made by the study of the nature and mode of action of the causes of disease, and that, therefore, the hope for the immediate future lies in the further study by every means that physiologic and biologic science can supply of the infective diseases The problems confronting the newer pathology, according to the speaker, are to determine the mode of onset, the prevention and the cure of disease To study prevention the method of infection must first be determined In the advances made so far, we have learned that not only is the transmission from man to man, but that the man's animal associates and enemies must be carefully scrutinized The problem of the causation of some of the infectious diseases, namely, smallpox, yellow fever, scarlet fever and measles, Flexner stated, must not be approached from the standpoint that the infective germs of these diseases are ultra microscopic in size The cause of disease discovered, the task of pathology, according to Flexner, is merely begun To possess the cause is merely to be confronted with the problem of the immediate manner in which it acts on the seats of disease to produce the changes which we recognize as being pathologic The speaker referred to the studies on immunity to bacterial infection, as removing a large part of the mystery of the so called self limiting diseases The present problem is to work out the phagocytic doctrine of Metchnikoff, the humeral doctrine of Ehrlich and the theories of active immunity reaction in the fixed cells of the body The most difficult problem is to determine the nature of bacterial immunity with the same success that has attended the work in the production of diphtheria antitoxin The junction of pathology with experimental therapeutics, Flexner believes, opens up a field for interesting and profitable research for specific chemical studies The recent study of the origin of tumors and the application of the principles gained in the study of infection and immunity in bacterial disease to the study of transplantable tumors in mice opens up wide vistas for future research, and Flexner emphasized that because of this no one is justified on account of the similarity in the phenomena to believe that tumors are of necessity caused by parasites, but rather it discloses the fact that infection and immunity to unicellular organisms are merely special cases of biologic reactions applicable to a wider and more complex series of living structures of which special instances have been found in relation to hemolysins, cytotoxins, precipitins, agglutinins, etc

Luncheon

The morning session was concluded with this paper, after which the members entertained their guests at an informal luncheon at the University Club, at which 250 were present

Pathology and Practice

At 4 p m in the assembly hall of the Pennsylvania Hospital in which historic building the first meetings of the society were held, Prof William Osler, University of Oxford, England was introduced by Dr Alfred Stengel, University of Pennsylvania and delivered an address He advocated the removal of public health matters from the hands of politicians and the teaching and training of men specially in matters affecting the physical well being of the entire community He further pointed out that the standard of medical education must be raised He regretted the possibility for men to graduate in this country without autopsy or hospital experience, and advocated reforms in this direction Here are a few epigrams from Dr Osler's lecture

With only a few drugs man can practice medicine very well
In the past fifty years our ideas have changed and we have reached a rational standpoint.
We are the teachers and not the slaves of our patients
We work by wit and not by witchcraft
Don t make promises to heal when it is impossible to heal
The highest aim is not to cure, but to prevent disease
He cures most in whom most have the greatest confidence
Give up lecturing medical students to death and make them do practical work
No one professor in medicine can teach all there is or know about everything

The banquet in the evening is mentioned under Philadelphia news this week, page 1687

AMERICAN CONFEDERATION OF RECIPROCATING, EXAMINING AND LICENSING MEDICAL BOARDS

Annual Meeting, held at Chicago, April 30, 1907

The President, DR W A SPURGEON, in the Chair, DR. B D HARISON, Secretary

The following state medical boards were represented Indiana, W A Spurgeon, W T Gott, Michigan, B D Harison, Ohio, H E Beebe, A Ravogli, Minnesota, W S Fullerton, Nebraska, B F Bailey, New York, C E Gorman, Massachusetts, E B Harvey, Kentucky, C A Mayer, Wisconsin, J F Stevens, P H. McGovern, Utah, R I Richards, Colorado, S D Van Meter, West Virginia, J L Dickey, North Dakota, F R. Smith, Idaho, W F Howard, Missouri, R H Goodier, Vermont, W Scott Nay

Others present were A D Price, Vanderbilt University, Tenn , S C Baldwin, State Medical Society, Utah, J A Witherspoon, Tennessee, Council on Medical Education, A M A , S L Jepson, State Medical Society, W Va , V C Vaughan, Michigan, Council on Medical Education, A. M A , F C Zapffe, Illinois, secretary Association American Medical Colleges, W J Means, Ohio chairman Judicial Council, Association American Medical Colleges, W B Hinsdale Michigan, dean Homeopathic Medical College, U of M , H N Ludwick, Illinois, ex secretary Wisconsin medical board, W T Councilman, Massachusetts, Council on Medical Education, A M A , A D Bevan, Illinois, chairman Council on Medical Education, A M A , N P Colwell, Illinois, secretary Council on Medical Education, A M A , L C Morris, Georgia, Southern Medical College Association, A B Bailey and A P Andrus, Wisconsin

The minutes of the Columbus (Ohio) meeting, April 25, 1906, were read and adopted

Secretary's Report

This report stated that there had been a conservative progress of the reciprocity movement during the past year, and that this movement had assumed a well defined educational system, as well as a necessary policy of convenience in medical licensure It called attention to the difficulty encountered from the fact that the term "medical reciprocity" was subject to an almost universal misinterpretation of its scope and intent Medical reciprocity (a) does not mean a leveling of the products of medical registration of two or more states followed by unrestricted endorsement of medical licenses of such states, (b) but the accepting of present and future conditions of standard of two or more states and endorsement on mutually accepted products of a certain and known standard

The only material thing accepted through Qualification 1 is the credit of the board examination and the recommendation of the reciprocating state covering moral and professional character Under Qualification 1 the former prevailing idea that reciprocity involved the recognition of licentiates in classes as opposed to individual recognition is fast disappearing A defective qualification, either involving preliminary or medical education, accepted in one state on account of exemptions in the law, or through error or defective administration, can not, through such state recognition, claim immunity in fulfilling the exact requirement of another state in reciprocity

Qualification 2, which involves the recognition of the older and experienced graduate, is also fast becoming better under-

stood The material qualification involved in this form of reciprocity is contained in the following definite statement "If the practitioner, at the date of his diploma and state license obtained on the basis of such diploma, could have fulfilled the requirements of the reciprocating state at such an even date and prior to the date of the requirement of the double qualification (diploma and state board examination), and, in addition, can furnish evidence of continued reputable and successful practice, then his qualifications may be endorsed" The fact that out of some 600 licenses reported endorsed during 1906 only 60 of these are under qualification 2 demonstrates that the danger attributed to this form of reciprocity is greatly exaggerated

Since the 1906 meeting the regular board of Georgia and the West Virginia board have been admitted to the confederation, and several other boards have put into effect reciprocity agreements with other states, and other boards have where possible, extended their reciprocity agreements to both qualifications

Thirty one states now endorse licenses through reciprocity, 13 under Qualification 1 only, and 18 under both qualifications and several states are obtaining the necessary legislation covering the future endorsement of licenses under both qualifications

The report suggested the issuing of a pamphlet similar to the one issued by the American Medical Association under the title of "Abstract of Laws" The report also called attention to the want of uniformity in application forms used by the several states and suggested the continuance of the committee on forms, having in view the remedying of this defect

Licenses were endorsed through reciprocity during the year 1906 as follows

States	No I	No II	Total
Connecticut Eclectic Board	6		6
Virginia	19		19
South Carolina Regular	8		8
Indiana	12	9	21
Iowa	55	8	63
Delaware	4		4
Maryland	Not classified		26
Ohio	50	6	56
Missouri	32	3	35
Illinois	47		47
North Dakota	20		20
Wisconsin	16	12	28
Georgia Homeopathic	1		1
Vermont	3	2	5
Minnesota	40	1	41
New York	31		31
Kansas	Not classified		120
Michigan	44	17	62
	388	58	593

Advanced Standing

Discussion on this subject elicited the fact that a large number of states have the statutory requirement of "four years in a medical college" It was the consensus of opinion, therefore, that the better policy for the confederation would be to take no action whatever relative to the subject of advanced standing, but that the subject should be left to the judgment of the individual board and the limitation of its medical act

It was, therefore, moved by Harison (Michigan), seconded by Stevens (Wisconsin), that all matter relative to advanced standing adopted at the Columbus meeting, 1906, and at all former meetings, be expurged from the minutes Carried

Attention was called by the president to the report of the Council on Medical Education, American Medical Association, relative to the result of an inspection of the medical colleges of the country by the council The result of this inspection was very highly commended by several members, and far reaching benefits were anticipated in the cause of higher standards in the future

Moved by Bailey (Nebraska), seconded by Ravogli (Ohio), that a committee of five be appointed (of which the president and secretary shall be members), whose duty it shall be to secure all data possible concerning the medical colleges of the country and to report at the next meeting of the confederation, with recommendations looking to better control of the colleges by the state in which they are situated Carried

The following were appointed members of such committee Harison (Michigan), Spurgeon (Indiana), Stevens (Wisconsin), Hamel (Missouri), Bailey (Nebraska)

Moved by Mayer (Kentucky), seconded by Stevens (Wisconsin), that the chairman appoint a committee of three to deliberate on and formulate a plan for more uniform legislation in respect to the powers of licensing boards in the revocation of licenses for immoral and unprofessional character Carried

The president appointed as members of this committee Mayer (Kentucky), Dickey (West Virginia), Canfield Indiana)

Preliminary Requirements

Moved by Bailey (Nebraska), seconded by Gott (Indiana), that no change be made at this time in the standard of preliminary education adopted by the confederation at Columbus, 1906, and that a committee of three be appointed to confer with the secretary of the Association of American Medical Colleges to consider the flexibility of such standard and to report at the next meeting of the confederation Carried

The president appointed as members of such committee Harison (Michigan), Gott (Indiana), Matson (Ohio)

Uniformity of Forms

The committee on uniformity of forms, of which Dr Stevens of Wisconsin is chairman, was continued

Officers Elected.

Dr W A Spurgeon, Muncie, Ind, a member of the Indiana State Board of Examiners, was re elected president, and Dr B D Harison, Detroit secretary of the Michigan State Board of Registration in Medicine, was re elected secretary

The president, Dr Spurgeon, stated that he wished to have recorded in the minutes a statement of appreciation of the very valuable assistance and advice the confederation had received from the Association of American Medical Colleges and from the Council on Medical Education of the American Medical Association, and he trusted that the confederation's relations with these bodies in an advisory capacity would continue in the future as it meant much in the cause of uniformity of standards in preliminary and medical education Several other members representing state medical boards, re echoed this statement of the president

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ASSOCIATION OF AMERICAN PHYSICIANS

Twenty second Annual Session, held at Washington, D C May 7 9, 1907

The President, Dr Francis P Kinnicutt, in the Chair

The Need of Perfected Organization

Dr Francis P Kinnicutt, New York in the president's address chronicled the death of three members during the past year, active members Drs Stewart of Montreal and Atkinson of Baltimore and honorary member Dr Latimer of Baltimore He spoke of the discoveries of Wright and Douglass regarding the opsonic power of the blood and the need for testing the practical availability of the procedure The physician of the past and too largely of the present has been the individual, and the profession has taken no commanding position in municipal and state affairs In those affairs they are now needed

Connections of Occipital Lobes and Present Status of Cerebral Visual Functions

Dr Adolf Meyer, New York, gave a lantern slide demonstration of specimens from cases showing that the optic radiations can be much further subdivided than has been done Among the points illustrated were the isolation of the geniculo calcarine tract the afferent character of the external sagittal marrow, the efferent character of the internal sagittal marrow, subcortical fibers toward the motor area, and the absence of fibers to the frontal lobe

DISCUSSION

Dr L F Barker, Baltimore, regar e dies as definitely proving many of the po ce of

especial value The subject is of great importance in diagnosis and the anatomy of these parts should be further elucidated.

Certain Features of the Nervous Breakdown.

DR JAMES J PUTNAM, Boston, regards as the most striking example of this acute breakdown the so called traumatic neurosis, though strains during school and college life and intercurrent events during chronic illnesses are also effective in its production The controlling influence in the causation of these states, and also the controlling means of treatment, is the mental state of the patient The methods of treatment must be based largely on re education of the patient specially the increase of his available stock of mental energy The objects to be aimed at are two First, to make the person more efficient, second, to make him more philosophic and ethical In general it may be said there is no single clue to all methods of treatment

DISCUSSION

DR ADOLF MEYER, New York, believes there is a possibility of misconception if the physician is asked to teach philosophy and ethics This is a most important point however, and both these will find a foundation as has psychology The ethics of habits and reaction types will become of prime significance

DR CHARLES L DANA, New York, regards a large number of these cases not a nervous breakdown, but a psychosis Some patients get over the condition in a short time, but with many it lasts

DR ABRAHAM JACOBI New York has in such cases almost always found changes in the heart, in some the presence of murmurs Hence one must remember there is a physical change, as well as the psychic to be treated

DR S WEIR MITCHELL, Philadelphia said these cases are sometimes emotional conditions sometimes physical breakdown It is often a complicated condition that works out in the sick room into its component parts Cases that begin acutely are extremely rare

DR PUTNAM said that we rarely see acute cases except those due to trauma Here strong encouragement is often effective The condition is not a pure psychosis, hence the visceral and other tissue changes must be observed and treated

Clinical Study of Aphasia

DR. CHARLES L. DANA, New York, studied some 30 cases of aphasia Nearly all cases fall into one of four groups First, pure motor aphasia, second inability to read, third, sensory aphasia of Wernicke, fourth, mixed cases, in which speech reading, writing, comprehension, in fact, almost everything, is lost Students learn to say where the lesion is when the symptoms of these groups are presented Apraxia occurs only with bilateral lesions, as a rule

DISCUSSION

DR. WILLIAM THOMSON, New York, can work out 27 types of aphasia instead of 24, as mentioned by Dr Dana He detailed three cases, all absolutely devoid of motor symptoms

DRS STARR, PUTNAM, PRINCE and DANA all stated their conviction that the contention of Marie that the speech center is not in the convolution of Broca is not proven

Inflammatory Masses in the Abdomen Simulating Malignant Growths.

DR. E G JANEWAY, New York, described several cases in which firm masses in the abdomen, with or without exploratory operation, were pronounced inoperable tumors, but which later disappeared entirely Some of these were in the iliac fossæ two in connection with gastric ulcer, and two in the region of the gall bladder These cases teach the clinician not to be too hasty in giving a bad diagnosis and prognosis He has no doubt that the so called removal of some tumors by the Roentgen ray and other methods has been due more to the "tincture of time" than to the agent employed They also teach that operation does not always absolutely settle the diagnosis

DISCUSSION

DR WILLIAM OSLER, Oxford, Eng, said that often physicians have been deceived by these cases They may be grouped in three classes, as they pertain to the region of the gall bladder, the stomach or the appendix and cecum His attention has lately been directed to a group of cases in which a mass is felt in the sigmoid region This may be due to thickened glandulæ epiploicæ which will deceive the elect, or to perforation of a foreign body or pericolic inflammation He agrees as to the fallibility of surgical operation, but always urges early interference Some operations are disappointing, but many are satisfactory

DR A McPHEDRAN, Montreal, spoke in this connection of tuberculous peritonitis He believes that more cases of this disease recover without than with operation He also mentioned a case of supposed malignant tumor of the pyloric end of the stomach for which gastroenterostomy was performed and which entirely disappeared

Etiology of Acute Pancreatitis

DRS H U WILLIAMS and F C BUSCH, Buffalo analyzed cases from the literature and reported experimental observations In cases where gallstones are absent they suggest that the previous passage of gallstones may have dilated the ampulla of Vater and thus allowed intestinal contents to pass into the pancreas Experiments on cadavers suggested the possibility of this occurring In some animals they caused pancreatitis by injecting into the pancreas duodenal contents They also pushed through the duct bodies similar to gallstones and then tried by pressure to force duodenal contents into the pancreas In some instances they succeeded in thus causing pancreatic lesions In consideration of physiologic facts it appears that autodigestion of the pancreas indicates the entrance into the organ of enterokinase, but the introduction of that substance into the pancreas did not produce pancreatitis

DISCUSSION

DR. EUGENE L OPIE, New York, said it is not improbable that the mechanism mentioned by the writers does occur and that pancreatitis is due to the entrance of duodenal contents However, the cases in which he has seen large stones in the ampulla of Vater have been those of chronic rather than acute pancreatitis, it appearing that bacteria instead of duodenal contents entered Bile and bile salts appear specially efficacious in producing pancreatitis

The Calcium, Magnesium, Phosphorus and Nitrogen Balances in a Case of So called Phosphatic Diabetes

DRS L. F BARKER and C VOEGTLIN, Baltimore, reported this case, the patient being a woman of 39, who for years suffered from dry skin cracking of the heels, nervousness and periodic losses in weight The urine was constantly of high specific gravity and high acidity She was put on Folin standard diet and the salts measured The results showed an abnormal metabolism The calcium was at first high, more than double the normal The phosphates were increased, but became about normal on diet The total acidity of the urine was striking, running at times to 1,500 c c five times the normal, and averaging 700 c c on Folin diet The relation of this form of acidosis to other forms due to starvation, diabetes, acute infections etc., is interesting There was no acetone or diacetic acid in the urine and the acidity was not due to lactic hippuric or uric acids The real cause is not known Carbohydrate metabolism was normal in this patient, hence it appears different than diabetic acidosis Whether this condition leads to the exhaustion of calcium and other salts is an interesting question

DISCUSSION

DR. WILLIAM OSLER said the chief point of interest in this case is that any one would have pronounced it a case of diabetes until the urine was examined, but repeated tests failed to show the least trace of sugar When he saw the woman he regarded the case as one of prediabetes and expected each examination of the urine to show that sugar had appeared

Dr A E Taylor, San Francisco, said he tested on himself the effect of an ash free, alkali free diet and felt nothing but lassitude for six days, when itching of the skin and general irritability began Sleep became impossible and diacetic acid appeared This was regarded as a danger signal and ordinary diet was resumed with disappearance of symptoms in a few hours Here the equilibrium was disrupted, though there was no particular withdrawal of calcium

Dr Barker said that salts are just as important in diet as are fats and carbohydrates There must be equilibrium or the muscles, including the heart, and nerves can not act properly These results constitute an interesting outlook for the future in determining the origin of disease

Relations Between Diabetes and Pregnancy

Dr Augustus A Eshner, Philadelphia, collated the literature on this subject, comprising 34 cases, and reported an unusual instance A colored woman of 34, who had had sugar in the urine for three years, became pregnant During pregnancy sugar disappeared, but again appeared shortly after the birth of a macerated fetus at term He found no similar case in literature Diabetes is uncommon during pregnancy, and this condition rarely occurs in diabetics The complication of one with the other usually increases the gravity of both often the fetus dies *in utero*, or premature labor occurs The mother sometimes dies of the disease shortly after labor

DISCUSSION

Dr James Tyson Philadelphia, now has under observation a diabetic woman who became pregnant while under treatment for the disease the urine showing 2 to 5 per cent of sugar The symptoms have been in no way aggravated and pregnancy is now near term

Experimental Fibrinous Pleurisy

Dr Eugene L Opie, New York, detailed experiments which show that the disappearance of fibrinous exudates in the pleura can be studied under conditions analogous to those which obtain in pleurisy and pneumonia in man He injects turpentine into the pleural cavities of dogs, producing sero fibrinous pleurisy Accumulation of fluid is at the maximum at the end of three days and fluid has entirely disappeared at the end of six days Resolution of fibrin begins while fluid is present and is completed after the fluid has disappeared In the first stage the fibrin digests itself in the presence of weak alkali, but later does so only in the presence of weak acid It is possible that carbon dioxid, acting in the body as an acid, promotes resolution of the exudate by the enzyme By aspiration of fluid and other means, as by repeated injections of turpentine, the characters of the exudate may be modified, even changed from sero fibrinous to purulent

Certain Acoustic Limitations of the Stethoscope and Their Clinical Importance

Dr Lewis A Conner, New York, studies confirm that certain sounds can be heard by the unaided ear and not by the stethoscope In the heart this is specially true of certain murmurs of aortic insufficiency, whizzing in character In the lung it is true of high pitched bronchial and also of amphoric breathing Three points were offered in explanation of this fact First, high pitched sounds are less readily propagated in closed tubes, especially elastic tubes Second, when the ear is placed on the chest wall sound is transmitted by the bones of the skull as well as by the ear itself Third, all chest sounds are composite and some bear certain relations to the tube of the stethoscope and are by it increased or diminished The practical point is that students are wrongly taught to use only the stethoscope, they should be encouraged to use the ear

DISCUSSION

Dr S Solis Cohen, Philadelphia, finds it difficult to make students trained only to the stethoscope hear the sounds he does Another point is that the stethoscope changes many sounds The sole advantage of that instrument is in localizing sounds previously discovered by the ear

Dr E G Janeway, New York, said that certain pneumonias do not give sounds with the stethoscope He also encountered one instance of a cavity not possible of demonstration with that instrument, though its presence was conclusive

Dr. Abraham Jacobi, New York, mentioned the difference in area covered by the ear and the stethoscope as one source of difference in their findings

(To be continued)

Marriages

Sylvia F Harris, M D, and Samuel Hardy of Nevada, Cal, at Berkeley, Cal, May 9

Henry L Stevens, M.D, to Miss Kittie Kinnear, both of Laramie, Wyo, April 30

Era M Scofield, M.D, to Miss Bessie C Brown, both of Jamestown, N Y, April 30

Edwin B Daugherty, M.D, Eveleth, Minn, to Miss May Alness of St Paul, May 1

Francis M Walsh, M.D, to Miss Eleanor Gertrude Murphy, both of Philadelphia, April 27

Charles Edward Klontz, M.D, to Miss Elizabeth Case, both of Cherry Valley, Ill, May 2

John R. Osborn M.D, Prospect, Ohio, to Miss Hazel Barber of Rushsylvania, Ohio, April 30

John T Harbottle, M D., to Miss Margaret Louise Hayes, both of Columbus, Ohio, April 30

Walter W Smith, M.D, Reily, Ohio, to Miss Marguerite Kitchell of Kitchell, Ohio, April 30

John H Seaman, M.D, New Haven, Mich, to Mrs William P Sprague, at New Haven, April 2

E E Bbunner, M.D, Carrollton, Mo, to Miss Mary D Neal of Southport, Eng, at Centralia, Mo, April 29

Ferdinand Austin Kittinger, M.D, Lockport, N Y, to Miss Adelaide F King of Buffalo, N Y, April 30

Charles A D Clark, M.D, Harbor Springs, Mich to Miss Matilde Beit of Sherman, Mich, at Cadillac, Mich, April 27

Deaths

John Traston Main, M.D Castleton (Vt) Medical College, 1857, a member of the American Medical Association, some time a member of the House of Representatives and Senate of Maine for a long time a private pupil and assistant of Dr Oliver Wendell Holmes, assistant surgeon of the Second Maine Volunteer Infantry in the Civil War, a member and president of the board of health of Jackson, Mich, and medical inspector of the City Hospital died at his home in Jackson, May 1, after a long illness, aged 75

Carl L Rominger, M D University of Tübingen, Germany 1840, a member of the Washtenaw County (Mich) Medical Society, the American Association for the Advancement of Science and the American Geographical Society, for many years state geologist of Michigan, and a recognized authority on his specialty died at his home in Ann Arbor, from senile debility, April 22, after an illness of four months, aged 86

John Sweetland, M D Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons Kingston Ont 1858, sheriff of Carleton County, Ont, formerly coroner for Lanark and Renfrew counties and surgeon of the County of Carleton General Hospital, president of the Medico Chirurgical Society, died at his home in Ottawa, Ont, May 5, from disease of the liver, after a long illness aged 71

Irvin B Webber, M.D Cincinnati College of Medicine and Surgery 1870 a member of the Indiana State and Kosciusko County medical societies, president of the Northern Indiana Medical Association United States pension examiner and health officer of Warsaw died on a street car while returning home from Winona Lake, May 1 aged 61

William Harrison Jopes, M D Missouri Medical College, St Louis a member and president of the board of managers of State Hospital No 3 Nevada, Mo for about 14 years, died at his home in Greenfield Mo April 12, from stricture of the colon after an illness of three months aged 72

James Dudley Pendleton, M D University of Virginia, Department of Medicine Charlottesville 1860 for 30 years assistant clerk a of th senate of died

suddenly at the home of his daughter in Bedford City, Va, April 10, from cerebral hemorrhage, aged 77

Marvin Stephen Buttles, M.D New York University Medical College, 1865, once vice president and president of the East River Medical Association, from 1864 to 1873 professor of obstetrics in the Medical Department of the University of the City of New York, from 1865 to 1872 surgeon of the Seventy first Infantry, N G S N Y, founder of the Olivet Female Infirmary, and medical officer of the New York fire department, died at his home in New York City, May 9, aged 73

Arthur Bertin De Villeneuve, M.D Medical Department of the Tulane University of Louisiana, New Orleans, 1872, well known as a physician, journalist, musician and linguist, died at his home in New Orleans, from heart disease, April 30, after an illness of six days

Charles Williams Ottley, M.D Johns Hopkins Medical School, Baltimore, 1899, formerly of Atlanta, Ga, for several years professor of biology in Robert College, Constantinople, Turkey, died at Johns Hopkins Hospital, May 8, from postoperative pneumonia, aged 36

William H. Hotchkiss, M D Medical Institution of Yale College, New Haven, Conn, 1872, a specialist in diseases of the eye and ear, died at his home in New Haven, May 2, from cerebral hemorrhage, after an illness of a few hours, aged 60

Fulton Rogers, M.D Medical Department of the Tulane University of Louisiana, New Orleans, 1867, a member of the American Medical Association, died recently at his home in Napoleonville, La, from chronic interstitial nephritis, aged 60

George H Fossard, M.D Albany (N Y) Medical College, assistant surgeon in the Army during the Civil War and chief surgeon of New York Volunteers, died at his home in Brooklyn, N Y, May 10, aged 68

James W Ferguson, M D Homeopathic Hospital College, Cleveland, Ohio, 1876, of Haslett, Mich, died May 6, in a hospital in Toledo, Ohio, where he was under treatment for inflammatory rheumatism, aged 58

James O H Banks, M.D Hahnemann Medical College and Hospital, Philadelphia 1873, died at his home in Pocopson Township, Pa, April 29, from cancer of the rectum, after an illness of two years, aged 78

William B Tackett, M D University of Louisville (Ky) Medical Department, 1849, one of the oldest practitioners of Johnson, I T, died at his home in that place, May 2, from senile debility, aged 82

Lester F Smith, M.D Illinois Medical College, Chicago, 1906, died at the home of his father in Brazil, Ind, May 1, from uremia following an operation on the prostate gland two weeks before, aged 23

William Jackson Kendall, M.D College of Physicians and Surgeons, Baltimore, 1884, died at his home in Paris, Va, February 20, from pneumonia, after an illness of five days aged 45

Samuel G Milner, M D Homeopathic College, University of Michigan, Ann Arbor, 1877, of Detroit, died at Grace Hospital, in that city, May 2, a few hours after a surgical operation, aged 61

Ira Lee Forsee, M.D Chicago Homeopathic Medical College 1904, died at his home in Louisville, Ky, May 2, from pneumonia following typhoid fever, after an illness of two months, aged 25

James Warren Cameron, M.D Hahnemann Medical College and Hospital, Chicago, 1878, died at his home in Salina, Kan April 20, from appendicitis, after an illness of one week, aged 60

James H Ferrell, M.D Homeopathic Hospital College Cleveland, 1885, died at his home in Marion, Ohio, May 3, from uremia, after an illness of two weeks, aged 55

Frederick Volz, M.D Jefferson Medical College, Philadelphia 1892, died suddenly at his home in Bloomington, Ill, March 27, from pulmonary hemorrhage aged 42

Anabel Holmes, M D Woman's Medical College of Pennsylvania, Philadelphia 1892, formerly of Chicago died April 22, at her home in Portland, Ore, aged 43

James A. Elder, M.D St Louis (Mo) Medical College 1879 formerly of Saline County, Mo died at his home in Pasa Robles Cal April 14 from paralysis

Willard W Wilcox, M.D Dutton Medical College Chicago 1899 of Oklahoma City, Okla was drowned while bathing at Tampico Mex, recently aged 60

Augustus H. Warren, M.D New York University New York City, 1886 formerly of La Grange, Ill, was found dead in Quincy, Ill, April 16, aged 70

Miscellany

THE INTERNATIONAL MOTHER TONGUE

A Plea for the Use of Latin Derivatives to Facilitate the Reading of Articles by Foreigners.

E CUSHING, CHICAGO

In no other science or profession is there such constant and widespread interchange of ideas as between members of the medical profession in all lands, all working to a common end

Everything that tends to make international communication easier is a direct boon to science and to the profession The present agitation in favor of Esperanto shows the craving and blind groping for an international tongue Those who are promoting Esperanto and Volapük overlook the fact, however, that every one now has at his command at least 5,000 words which are practically the same in English, French and all the Latin tongues and are understood by scientific Germans and others Every word derived from the Latin is understood at once by any one who has ever studied Latin or is familiar with French, Spanish, Italian or Portuguese, scientific Russian, scientific German, scientific Danish, Swedish, etc Terms from the Greek are also alike in all languages

THE JOURNAL has already drawn attention to this fact, and has shown that a sentence can be couched in good English terms which yet will be intelligible to persons of other nations, with, perhaps, the exception of the more common, shorter words, prepositions and conjunctions which can be looked up in the dictionary and easily learned Writers *would aid the progress of science if they would bear this fact* in mind, and, at least in the titles of their articles, use such terms as are understood the world around

If medical writers would take pains to couch the summaries at the end of their articles in this International English, as it might be called, the cause of science would be immeasurably promoted There is no doubt that anything "the Americans" have to say is listened to abroad with interest and respect—when it is understood If other nations followed this same plan of using words which are already in international use, the reading of their scientific articles would be much facilitated for us

All scientific journals and works in Germany have long been published in our ordinary type, and it is used commonly everywhere now, except in far eastern Europe Consequently, there is no difficulty from this source A knowledge of the verb "to be" and of the articles "the" and "a" is not indispensable, as the sense is so easily made out without them "Is" and "are" are omitted as superfluous in some languages, and we know that Latin has no article, having only eight parts of speech

The summary at the end of Dr Camp's article on "Paralysis Agitans" in THE JOURNAL for April 13, page 1239 is a model specimen of this International English There is only one word "disease," which a foreigner would have to look up in the dictionary, besides an occasional preposition The prepositions he would soon learn by heart if he could hope for frequent summaries in International English

We quote the summary referred to in full, to show how beautifully the English language adapts itself to international use The word "disease"—which is from a Gothic root and has no counterpart in other languages—might have been replaced by "*malady*" when the whole contents of the summary would have been clear to any scientific foreigner

1 Paralysis agitans is not a neurosis nor is it senility
2 The anatomic basis of the symptoms muscular rigidity and tremor and the symptoms depending on them lies in the affection of the muscles
3 The disease itself is probably a general toxemia and there is suggestive evidence that it is due to alteration in the secretion of the parathyroid glands

The conclusions of Camp's article in German, worded with a view to international comprehension, would read as follows

1 Paralysis agitans ist nicht eine Neurose und ist nicht Senilität.
2 Die anatomische Basis für die Symptome Muskel Rigidität und Tremor mit den davonabhaengigen Symptomen liegt in der Muskel Affection
3 Die Paralysis agitans selbst ist wahrscheinlich eine generelle Toxaemie die aus alterierter Sekretion der Parathyroiden hervorgeht.

In French the same conclusions would read

1 La paralysie agitante n est pas une névrose et ce n est pas la sénilité
2 La base anatomique des symptomes, rigidité musculaire et tremblement et les symptomes qui en dépendent, réside dans l affection des muscles
3 La maladie propre est probablement une toxémie générelle et les phénomènes observés plaident en faveur de l assumption qu elle est le résultat d une altération dans la sécretion des glandes para thyroidiennes

Comparison with the original English will demonstrate that every writer in every language has it in his power to couch at least the titles and summaries of his articles in an international mother tongue which will be understood by scientists under every flag

The conclusions of Camp's article would not have been understood at all by the foreigner if they had been worded as follows He would have had no idea that the writer was discussing paralysis agitans

1 Shaking palsy is not a nervous disease nor is it the decay of old age.
2 The anatomic groundwork of the perceptible change in function, stiffness of the muscles the shaking and the changes in function springing from them lies in a diseased condition of the muscles
3 The disease itself is probably due to the action of poisons in the blood, and there are grounds for supposing that it is the result of changes in the secretion of the parathyroid bodies

Couched in these terms the foreigner would view the summary "as through a glass, darkly," and pass over it without heed, skipping it as absolutely beyond his comprehension, even although he might be specially interested in Parkinson's disease.

In writing for international comprehension, it must be remembered that figures are the same in all languages and are recognized at once by readers of all nationalities They frequently provide welcome stepping stones when an explorer is making his way with difficulty through the morass of an unfamiliar language, "2" is understood by every one, but "two" only by those familiar with English Such local terms as "mumps," "bowels," "Genickstarre," "kusma," "coqueluche," and the like should be replaced by more scientific terms before an address or article is sent anywhere for publication

Scientific writers, especially medical writers, are so modest that they often fail to realize that their article—if known to some investigator abroad—may lay the foundation or supply the finishing stone for some important structure with which their name will be indissolubly connected, or, at least, it may save other investigators from going needlessly over the same ground again

The heedless may ask with the Irishman "Why should we take so much trouble for posterity? What has posterity done for us?" but the thoughtful will realize that scientific works are a mine of information for workers of this and future generations in all lands, and that everything which tends to aid in the dissemination of scientific facts now or later, hastens the reaping of the harvest

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Patent and Other Proprietary Medicines Abroad

The jealous regard for individual rights in the United States and in England gives the probable reason for the reluctance with which these countries have interposed legal restrictions on the trade in "patent" and proprietary medicines The result is that in these two countries the nostrum maker has had more chance to humbug the public and the profession than in any other country However, there is an awakening in England as well as here The *Lancet* in its issues for November 17 and 24 contains a review of the subject of "patent" and proprietary medicines by a barrister at law who takes up the matter from the lawyer s viewpoint While we can not give space to the complete article which we would like to do, we think the following quotations and abstracts are worthy of reproduction

"There are virtually no restrictions in Great Britain on the sale of proprietary secret medicines so long as these contain no scheduled poison and no considerable proportion of alcohol By the use of the medicine stamp, absolute proprietary rights and absolute secrecy with regard to the composition of any medicine whatever may be indefinitely maintained" Medicines containing scheduled poisons must be sold at retail only by a registered pharmaceutical chemist or chemist and druggist, and in the shop of a registered chemist or of a limited company and must be labeled poison Scheduled poisons do not, however, include such articles as acetanilid, sulphonal and trional Excise licenses are necessary for the sale of preparations containing much alcohol

Patents are granted to medicinal preparations for the period of fourteen years on the theory that they are novel and useful The patent authorities are bound to search their records to determine the novelty of the new process, but have no authority to refuse the patent on the ground of novelty, but such a patent may be declared invalid if protest is made According to high authority, a chemical substance is never the subject of patent It is only the process of manufacture that can properly be patented A trademark gives usually better protection to the proprietor of a medicine than a patent To secure the protection of a trademark it is not necessary to show that the remedy is new or useful, but the name must be non descriptive and can be registered at any time and applied to the remedy whenever it becomes convenient It protects the property in the name, not only for fourteen years, but for ever The manufacturer attempts to secure a word which approaches, as near as may be safe to the border line between descriptiveness and non descriptiveness The *Lancet* aptly illustrates this by the case of "tabloid" "The registration of the hybrid word, 'tabloid'—derived from a thoroughly familiar Latin root and an equally well known Greek suffix—was a masterpiece of foresight and sagacity The word so aptly describes the article to which it is applied that it naturally springs to the lips of the average person who wishes to buy compressed tablets, yet the word has been held by the Court of Appeal to be a valid mark and is private property for all time The result is that there is a permanent quasi monopoly in an article of commerce which was at one time the common property of all traders"

The shrewdness of manufacturers has led them to perpetuate the rights obtained by patent after the expiration of the patent by advertising the article under the trademarked name and thus continuing indefinitely the protection of the trademark to the article which has become known under that name. Decisions of the English courts have, however, made this protection invalid if anyone sees fit to contest it "Where an article has been introduced as new and has first been manufactured under a patent, the name by which it is known becomes common property as soon as the expiration of the patent rights puts an end to the monopoly in the manufacture and sale of the article' (Kerly on Trademarks) Unfortunately, it is not worth while for any one firm to incur the expense of moving the court in order that the whole community may share in the benefits obtained So as often as not, the monopoly persists and the public, of course, has to pay

EXCLUSIVE RIGHTS TO PUBLIC PROPERTY

A good example of the abuses to which the patent and trademark laws are subject is shown by the following quotation from the *Lancet* article

"There are at the present moment many firms of manufacturers who devote much thought to the perfection of devices whereby they may secure exclusive rights in this or that medicinal substance which is now public property In some instances they boldly apply for a patent for some already known chemical substance or process trusting that the insufficiency of present requirements of the law with regard to novelty in an application for a patent or the complex language of their specification or the addition perhaps of some illusory 'improvement' and the inactivity of other traders will enable them to achieve their object A good example of this is to be seen in the acetyl salicylic acid [Aspirin] case recently before the courts In that case it was shown that a patent had been obtained and for many years enjoyed in respect to a chemical compound, the process for manufacturing which was perfectly well known before the patent was issued The judge in declaring the patent invalid remarked that, by error accident or design, the specification had been so framed as [illegible] as possible

"But it is rarely that this method of securing proprietary rights in medicinal substances is attempted The easier and more usual method is to apply to the coveted remedy a trade mark consisting of some 'invented' word This may be chosen especially to suit the substance or it may be a word which the manufacturer has had 'in stock' while he waits for some thing to turn up, to which the mark may suitably be applied For example, since the acetyl salicylic acid patent was declared invalid rival firms have endeavored to 'collar' the trade in the compound by applying to it fancy trademarks and attempt ing to persuade medical practitioners to use these only when prescribing acetyl salicylic acid Can it seriously be contended that there is such a difference between the brands of acetyl salicylic acid sold by A under the name of 'aspirin,' or by B under the name of 'saletin,' or by C under the name of 'salace tin,' or by D under the name of 'acetysal,' or by E under the name of 'xaxa, and the compound sold under its proper chemi cal name, as to make it desirable in the interests of the public health that the state should protect five separate proprietary interests in what is to all intents the same article, and that a well known and useful piece of public property? And can it be regarded as desirable that the real nature of the compound should be masked by the use of all these fancy words? To give other examples, different brands of hexamethylene tetra mine have the following fancy names Urotropine, amino form, formin, cystamine, uritone and naphthamin, while adre nalin competes with suprarenalin, epinephrin, adnephrin, adrin, suprarenin, haemostasin, renastyptin and paranephrin All these, or nearly all, are registered trademarks"

AS OTHERS SEE US

In the second article the *Lancet*, November 24, the United States is designated as the "home of all that is worst in the proprietary medicine trade" Preparations strong in alcohol and morphin "flourish exceedingly" The attempts at legis lation in various states are noted and their failure attributed to "strenuous opposition from the newspaper press, nearly the whole of which is afraid to offend the advertising nostrum manufacturers" 'But in some respects the governments have powers which are not possessed in Great Britain For in stance when 'liquozone' was publicly exposed in 1905, although no attempt was made by any government department in Great Britain to take action in the matter, the San Francisco board of health, exercising power vested in it, promptly forbade the sale or distribution of 'liquozone' on any terms whatever within the area of the board's jurisdiction"

CUBA.

In Cuba a law requiring the publication of the ingredients of proprietary medicines on the labels was modified through the influence of the nostrum proprietors so that the disclosure need only be made to a government official pledged to secrecy In Porto Rico the law requires that all the formulas of all proprietary medicines shall be filed with the government before the medicines can be sold The law had an immediate effect on nostrums imported from the United States and the Porto Rico druggists ceased to sell many American proprietary medi cines in which they had formerly dealt

AUSTRIA

The laws of Austria are especially worthy of study The qualified pharmacist is the only person who may compound or sell any preparation containing poison, and in all such cases a physician's prescription is necessary Proprietary medicines can not be placed on the market without permission of the board of health which must first have been informed of the exact composition of the article, supplied with samples, and satisfied that the compound is in some way novel or useful or that it is presented in an improved form No recommendation of any proprietary medicine as a cure for any disease is al lowed, and all advertisements in the press and elsewhere are under the direct and strict supervision of the police The price of proprietary medicines is fixed by the board of health, and foreign proprietary medicines are not allowed to enter the country unless under certain exceptional conditions. The law is said to work well

FRANCE.

In France only qualified pharmacists may make and sell proprietary medicines, the formula must have been published (a) in the "Codex" or (b) by the government, or (c) in an issue of the *Bulletin de l'Académie de Médecine*, the publication of advertisements for secret medicines is contrary to law The law is loosely enforced

GERMANY

Germany excludes foreign proprietary medicines by a heavy import duty and regulates the traffic in home remedies by for bidding advertisements of certain remedies, requiring that the bottles shall not bear labels or be wrapped in circulars con taining recommendations, certificates, etc. Some potent medi cines may be sold only on a medical man's prescription. The composition of all scheduled remedies must be known to the druggist who sells them Analyses of new medicaments and secret remedies are being made at the Berlin Pharmaceutical Institute and published in the *Apotheker Zeitung* The regu lations are not the same in all parts of the empire, but the gen eral result is greatly to discourage the sale of secret remedies A well known English proprietary medicine was voluntarily withdrawn from the German market by the proprietors, who objected to disclosing the formula of their preparation and did not think that much business could be done if its sale were subjected to the restrictions on secret medicines? The adver tising managers of two Hamburg journals were each fined $12 or five days' imprisonment for publishing advertisements of Allcock's plasters, the composition of which was not declared.

AUSTRALASIA

Australia and New Zealand appear to be especial sufferers from the proprietary medicine evil and the trade has reached enormous proportions there A writer in *The World's Work* is quoted as stating that these countries imported in 1905 proprietary medicines of the invoice value of nearly $1,500,000, many of them being of a flagrantly noxious character and ad vertised by grossly fraudulent means Laws have been passed bringing medicines containing scheduled poisons under the regu lations for the sale of poisons, and regulations have been estab lished by the board of health of Victoria limiting the amount of alcohol in non official remedies of which the average dose is more than one teaspoonful for adults to 10 per cent, also requiring the publication of the presence of a long list of narcotics The federal government is empowered to forbid the importation of proprietary medicines containing narcotics, etc, without a declaration of the contents on the label and may re quire the disclosure of trade secrets and may confiscate unap proved articles, the postmaster general may refuse to transmit letters sent in connection with a fraudulent business

In New Zealand an attempt was made nearly three years ago to require certain nostrums to the number of 160 to bear on their labels a full disclosure of their constituents, with the quantity of each The opposition of the proprietary men was so powerful through their influence with the business men and the newspapers that the regulation was toned down until it was required that the disclosure need be made only confiden tially to the minister of public health, and only when such dis closure should be specially demanded Thus whittled down the regulations clearly can not do much to protect the public

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Sanitary Conditions at Mauritius—Consul Botkin, in his report, gives the following information regarding the sanitary condition of this British island in the Indian Ocean The island has an area of 715 square miles, including reefs, bars etc. The population numbers almost 400,000 people, who live on an area of half that of the entire island The remainder of the island consists of mountains, forests, and military reserva tions, where dwellings are forbidden, though little of such idle land is fit for human habitation The total population con sists approximately of 260,000 Indians, 5,000 Chinese, 80,000 creoles (negroes and mixed), and 50,000 whites The drain age is naturally very good, and the natural condition has been greatly improved by the substantial manner of building the roads and the permanent drainage canals on each side of the roads There are few swampy lands and no stagnant

water Water for drinking and culinary purposes is derived mostly from Mare aux Vacoas, a fresh water lake that occupies one of the large ancient craters near the center of the island and furnishes from some hidden source an inexhaustible supply of very pure water, which is piped to all the towns and villages Owing to the porous nature of the thin soil and of the lava rocks beneath it, the rain water carries downward much surface filth, contaminating well water and causing much of the fever prevailing among the Indian coolies and lower class of creoles Malarial diseases are generally present along the coast The constant prevalence of malarial disorders and fever forced almost the entire white population, years ago, to abandon the port towns Except during about ninety days in June, July and August, annually, very few white people are to be seen in Port Louis after 5 30 p m During those ninety days a moiety of the whites venture to sleep near their places of business, but even then the risk of getting the fever is very great Bubonic plague is another constant menace to the colored populations of the coast towns Plague made its first appearance on this island about eight years ago, and all efforts to stamp it out and prevent its recurrence have failed Beriberi appeared among the convicts at Beau Bassin prison about March 1, 1907, and created great alarm throughout the island, but the health officials soon had the disease under control They assumed that the cases of beriberi were caused by the daily ration of Saigon rice, which only recently the authorities had been furnishing to the prisoners in lieu of Indian rice as formerly Wholesome wheat bread was substituted and the use of Saigon rice strictly forbidden at the prison The result was a disappearance of the malady

Etiology of Beriberi—The study of beriberi has been assiduous and has attracted the attention of a number of European and Japanese pathologists So far no satisfactory explanation of the etiology of the disease has been arrived at, although the recent researches point in the direction of an infection The investigations of Wright led him to believe that the symptoms are due to an intoxication from the products of the growth of a bacillus which makes its domicile in the upper part of the duodenum The difficulty of demonstrating the pathogenic character of an organism found in the gastrointestinal canal has, however, prevented his theory from gaining ground C W Daniels ("Studies from Institute for Medical Research, Federated Malay States," vol 4, part 1), reports a large number of observations on this disease made in the Federated Malay States, which give a basis for certain conclusions, although they do not settle the question of the etiology of the disease The occurrence of the disease in prisons gives a good opportunity for testing certain theories of the disease, especially those which attribute it to the effect of certain articles of diet and to the location or character of the dwelling As the prison fare is practically identical in the various prisons, it is possible to eliminate its influence in comparing the statistics of epidemics in different prisons The author reaches the following conclusions

1 Beriberi is an infectious disease. As a rule a short period of incubation and a period of exposure of less than three months is requisite for full development of the disease where the endemic index is high

2 There is no definite proof that intermediate host is required but the balance of evidence is against its being conveyed by earth air water or food or contamination with sewage or other fecal matter

3 There is some evidence that for a short period only after the occupation of small spaces beds bedrooms etc. the 'poison or carrier of infection may remain

4 Food as regards quantity and quality its nature or relative proportions may have an effect on the susceptibility of the patients although the proofs are not conclusive but is not the causative agent

5 If an intermediate host for the unknown parasite is required, it must be either a cimex or a pediculus Pediculi as carriers would better explain the incidence of the disease than any other blood sucker

6 A closer inquiry into the earlier stages of the disease is required Where opportunities for such an inquiry occur renewed attention should be bestowed on the blood and tissues with a view to determining the presence or absence of any protozoon

7 Prophylaxis In view of the failures of various attempts at disinfection of buildings and places and of various modifications of diet to have a marked effect more attention should be paid to limiting the chances of personal infection and particular attention should be paid to the personal cleanliness freedom from vermin and isolation of early or trivial cases of the disease

Pernicious Anemia Cured with Intravenous Injection of Corrosive Sublimate—A young man was suddenly attacked with high fever of an intermittent type, followed by sweats, and refractory to quinin and change of air After the febrile period and an afebrile interval of nine days, remittent fever was observed, with vomiting, diarrhea and enlargement of the spleen, while the blood contained only 1,292,000 reds and 5 400 whites, with 25 per cent hemoglobin A week later the general condition was progressively worse and the blood picture was 645,000 reds, 4,300 whites and hemoglobin 20 per cent, with numerous megaloblasts Baccelli made an intravenous injection of 1 cg (1/6 grain) of corrosive sublimate, according to his well known technic, giving six injections in the course of 8 days Within 6 days the blood picture had improved to 1,450,000 reds, 8 800 whites and hemoglobin 29, three days later the reds numbered 2,208,000, the whites 6,500 and the hemoglobin had reached 35 per cent, while within three weeks of the last injection the blood findings were practically normal Reds 3,500,000, whites 4,500, and hemoglobin percentage 70 Baccelli ascribes the fulminating progressive pernicious anemia to invasion of the system by some unknown germ which is destroyed by intravenous injection of sublimate The patient has since had an attack of acute gastrointestinal disturbance with malarial symptoms, after errors in diet, and the parasites of quartan fever were found in the blood, but he recovered under a few doses of quinin, and the blood picture at no time showed any tendency to the pernicious anemia type He has since been in good health The case is reported in the *Policlinico*, xiv, page 149, 1907, the communication ending with the remark "We hope that physicians everywhere will give this method of treatment a faithful trial, for the benefit of humanity"

Recent German Legal Decisions in Regard to Medical Fees.—A physician rendered an account in January of the fees due him from a certain patient, and when the account had not been paid in March, he brought suit for the amount. The judge affirmed that the defendant should have paid for the medical services at the time they were rendered At the very latest he should have paid the bill at once on its presentation In another suit a man was sent by his family physician to a specialist for a middle ear affection The patient refused to pay the specialist any more than the regular fees he would have paid the family physician The judge decided in favor of the plaintiff, affirming that a specialist is not justified in charging more than the regular fee without further notice In another case the judge decided that the patient must bear the expenses of a consultation of physicians whether he had agreed to the consultation or not. If he wishes to protect himself against such expense he must inform the consulting physicians on their arrival that he does not want their aid In another case a father had paid the physician's account for treatment of an aural affection in a child The child returned to the physician again and was given another treatment for which a charge of about 75 cents was made This the father refused to pay, as the child had returned without his knowledge or consent, but he was ordered by the judge to pay it—From the *Zeitschr f ärztl Fortbildung*, iv, 95, 1907

Anesthesia of the Teeth from Cocain Tampon in Nose—Escat has recently announced, and his statements are confirmed by Lederer, that a tampon moistened with cocain and inserted in the nose will induce anesthesia of the gums and teeth below the nasal fossa The anesthesia does not develop until from 15 to 20 minutes after the tampon dipped in 5 or 10 per cent solution of cocain has been introduced into the nose The anesthesia is most intense about the thirtieth minute, the tampon is then removed, and the anesthesia persists for 15 minutes longer, and then gradually subsides In examination of 500 patients the anesthesia was found crossed in 8 cases, and in 37 the gum and teeth on the opposite side were also partially anesthetized In Lederer's experience the anesthesia amply sufficed for operations on the teeth, even extraction of carious roots, and in a communication to the *Prag med Wochschr*, xxxii, 90, 1907, he discusses the anatomic basis for the phenomenon

Ether to Check Suppuration.—Souligoux and Tillaux have reported unusually fine results from the use of ether in aborting suppurations They scrub the skin with a freshly boiled

nail brush until the epidermis is removed, and then dress the part with several compresses dipped in ether, covered with oiled silk. Every hour a corner of the dressing is raised and more ether poured in to keep the compresses moist This is kept up for several days and the suppuration retrogresses to complete absorption in a few days, without the necessity for an incision An article in the *Tribune Méd*, xl, 217 1907, describes some of their experiences The favorable effect of the ether is ascribed to its pentetration into the skin where it acts as a microbicide while stimulating phagocytosis

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every-day practice Contributions will be welcomed from our readers]

THE METRIC SYSTEM AND HOW TO USE IT

W A Jolley, M D
BOULDER, COLO

(*Concluded from page 1631*)

1 *Liquid Measurements*—Table 1 is intended to facilitate the acquirement of the metric system for practical prescribing, but it is not accurate enough for scientific work

TABLE 1

15 minims	1 cubic centimeter
1 dram	4 cubic centimeters
1 teaspoonful	5 cubic centimeters.
1 ounce	30 cubic centimeters.
1 pint	500 cubic centimeters
1 quart	1 000 cubic centimeters.

Prescriptions should be planned so that numbers to which we are accustomed in our monetary system may be used—that is, decimal fractions and the short cuts used in financial calculations

The majority of acute conditions for which physicians are called to prescribe subside in two or three days and do not require more than about twenty doses of any remedy, and when it is remembered that a teaspoon holds about 5 c.c it will be seen that 100 c.c is all that need be prescribed If the dose of the drug is less than 5 c c. multiply the selected amount by twenty (20) and add some vehicle to bring the total amount to 100 c c.

This is a convenient amount to prescribe when the medicine is to be given three times a day for a week For one month 500 c c is approximately the quantity to prescribe if the medicine is to be taken at meal times as is usual in continued treatment

When preparing antiseptic solutions 1,000 c c or 1 liter is convenient to use

The following prescriptions will explain this more fully Aconite is generally used in most fever mixtures, taken 0 5 c c at a dose Liquor potassii citratis may be used as a vehicle It requires practically no mental effort to write

℞ Tincturæ aconiti (5x20) 10|
Liquoris potassii citratis q s ad 100|
M Sig A teaspoonful every 4 hours

The following prescription containing nux vomica may be used when a tonic is to be given, for a month

℞ Tincturæ nucis vomicæ (5x100) 50|
Tincturæ gentianæ comp q s ad 500|
Sig A teaspoonful before meals

The metric system has no equal when preparing solutions of a definite percentage For example if there were no bichlorid of mercury tablets it would take the ordinary man several minutes to decide on the proper amount to be used in a 2 to 1 000 solution but a prescription is easily written in the metric system

℞ Hydrargyri chloridi corrosivi 2|
Aquæ q s ad 1 000|
Sig Poison Use for wash

2 *Weights*—It is more difficult to handle weights, for the quantities are so small and the specific gravity varies so greatly that one can not compare the different amounts as with liquids The term "one grain" conveys to the mind an idea of a definite quantity that has been used as a standard from habit, not for convenience In the case of alkaloids the grain is divided very minutely and the term is dropped altogether if the amount is a dram or more

The metric system offers a number which does not have these objections I will take 0 05 gram, or 50 mg, as a basis for smaller calculations, because it is approximately a grain and can be used even if large quantities are to be weighed.

This has the same advantages that 5 c c. has in the liquid measurements, but to secure the advantages of the decimal system the prescription should be written for 10, 20 or 50 doses if powders, pills, capsules, tablets, suppositories, or any solids are to be given For example

℞ Pulveris ipecacuanhæ et opii (5x10) 5|
M Ft. pulveres No x

A great obstacle lies in the fact that tablets are not made in the metric system, so that physicians who dispense their own medicines think that they can use only the apothecaries' weights, but this is a mistaken idea Tablets can be selected, the dosage of which can be stated approximately in the metric system, and so label them until the tablets are made in the metric weights, as they will be eventually Table 2 gives an idea of the approximate equivalents, not accurate enough for scientific work, but close enough for practical dispensing

TABLE 2

1/500 grain =	000125		
1/250 grain =	00025		
1/120 grain =	0005		
1/60 grain =	001	or	1 milligram
1/30 grain =	002	or	2 milligrams
1/10 grain =	005	or	5 milligrams
1/6 grain =	01	or	10 milligrams.
1/3 grain =	02	or	20 milligrams
1/2 grain =	03	or	30 milligrams
1 grain =	05	or	50 milligrams.
2 grains =	125	or	125 milligrams
5 grains =	3		
15 grains =	1 gram		
1 dram =	4 grams		
1 ounce =	30 grams		

As a practical illustration I select a few of the above equivalents which can be used when ordering tablets

Aconitin	1/500 grain can be labeled	000125
Strychnin sulphate	1/60 grain can be labeled	001
Strychnin sulphate	1/30 grain can be labeled	002
Calomel	1/6 grain can be labeled	01
Calomel	1 grain can be labeled	05

That sacrifices extreme accuracy for mathematical convenience as is the practice in writing prescriptions in the apothecaries' system

It is easy to use the metric weights in ointments and suppositories For example

℞ Ichthyol 2|
Olei citronellæ 5|
Adipis lanæ hydrosi 50|
M et ft unguentum

℞ Pulveris opii 2|
Olei theobromatis 20|
M et ft suppositoria No xx

3 *Solids and Liquids*—Manufacturers and wholesale druggists use the avoirdupois ounce (437 5 grains) when selling drugs A druggist may take an unbroken package without remembering this fact and fill a prescription with it, in which case the patient will receive less than intended This can not occur in the metric system The following prescription illustrates the case with which solids can be accurately combined with liquids

℞ Potassii iodidi (2 5x100) 25|
Syrupi sarsaparillæ comp q s 500|
Sig One teaspoonful three times daily

The accuracy of the metric system is especially evident in handling alkaloids when percentage solutions are to be made, as is often the case with cocain For example

℞ Cocainæ hydrochloridi 4|
Aquæ destillatæ q s ad 10|
M Sig Four per cent solution of cocain

4 *Practice*—Having thus obtained a theoretical knowledge of the principles involved, a practical knowledge should be acquired by actual work with graduates, bottles, and scales, using common drugs until one is familiar with the different terms and the quantities they represent The next step can be

combined with a study of the changes in the new Pharmacopeia A physician might take a file of prescriptions and ascertain the principal drug he is using He can consult the new Pharmacopeia and study the preparations made from each, the percentage of active principle, dose, and pharmaceutical indication This information could be written on a card to be studied at leisure, as follows

Nux vomica	
Nux vomica contains 1 25 p c. of strychnin dose	05
Extract nux vomica contains 5 p c. of strychnin dose	0125
Fluidext. nux vomica contains 1 p c. of strychnin dose	05
Tinct nux vomica contains 1 p c of strychnin dose	5
Iron and strych cl rate contains 1 p c. of strychnin, dose	125
Elixir iron quinin and strych contains 275 in 1 000	4
Glycerite of iron quinin and strych contains 8 in 1 000	1
Syrup of iron quinin and strych contains 2 in 1 000	4
Syrup iron hypophosphite comp contains 115 in 1 000	8

Such drugs as opium, belladonna, digitalis, coca, cinchona, aconite, ipecac, iron, arsenic, and a few others could be handled as described Drugs are being standardized and the strength of the active principles expressed in percentages Tinctures are made to contain a definite percentage of the crude drug Test solutions and all scientific work is based on the metric system Continued use will bring out the advantages of this system which are not apparent at first

To Determine Amount of Active Principle—The amount of the active principle in each prescription can easily be calculated when written in the metric system as follows In the first prescription given in this article 10 c c. of the tincture of aconite was prescribed, 100 c c contains 045 gm. of aconitin, 10 c c will have 0045, and each dose will contain 0002 aconitin

In the second prescription it must be remembered that as 100 c c. of the tincture of nux vomica contains 1 gm strychnin, then 50 c c contains 05, and each dose will represent 0005 strychnin

In the fourth prescription the amount of opium is 1/10 of the entire quantity = 5, the quantity of morphin is 12 per cent of 5 = 06 In each powder, 006

5 Dosage for Children.—One advantage of the metric system is the facility with which dosage for children can be computed Consider the age of an adult as 20 and use that number for a denominator and the child's age for the numerator, as follows Estimate the dosage for an adult for one dose in that particular condition This then will be the total required in a mixture containing 100 c c for a child one year old if a teaspoonful is given as each dose, a child two years old will require twice that amount in the 100 c c, and so on up to the adult

There is no short cut to knowledge of the metric system One can not drop at once that which has been used constantly for years, but when once this has been done and the metric system taken up in its place a step forward has been made in practical medicine Remember the fundamental principle *Do not transpose doses*

Scabies

Sabouraud claims that scabies may be cured in an hour and a half by the following method of treatment

The patient is first rubbed for half an hour with black soap (green or soft soap), he then takes an alkaline bath for half an hour After coming out of the bath the entire surface of his body is to be well rubbed with

℞ Oil of verbena	
Gum tragacanth of each	1 part
Precipitated sulphur	100 parts
Glycerin	200 parts

To be well mixed

A final bath is then to be taken, lasting from fifteen to twenty minutes The clothing and body linen must be disinfected During the two weeks succeeding this treatment four baths of starch water are given In case there should be cutaneous irritation local applications of ointment of zinc oxid are used

In the treatment of this condition Potter recommends the following combination

℞ Hydrargyri chloridi corrosivi	gr iv	
Alcoholis	f℥vi	
Ammonii chloridi	ʒss	
Aquæ rosæ q s ad	℥vi	

M Sig Apply as a lotion to affected parts

Bulkley advises the following

℞ Sulphuris sublimati	ʒii	8
Olei cadini	f℥ii	8
Cretæ preparatæ	ʒiiss	10
Saponis viridis		
Adipis, āā	℥i	30

M Ft unguentum Sig Apply to affected parts

For children and individuals with delicate and sensitive skin Stelwagon recommends the following

℞ Sulphuris sublimati		
Balsami peruviani, āā	ʒii vi	8 24
Adipis benzoinati		
Petrolati, āā, q s ad	℥iv	120

M Ft unguentum Sig Apply to affected areas

For the average dispensary patient the same author advises the following

℞ Sulphuris sublimati	ʒiv vi	15 24
Balsami peruviani	ʒiv	15
Beta naphthol	ʒi ii	4 8
Adipis benzoinati		
Petrolati, āā, q s ad	℥iv	120

M Ft unguentum Sig Apply to affected areas

Before the ointment is applied Stelwagon has the patient take a hot bath, using plenty of soap, preferably green soap unless the skin is over sensitive All the affected parts are rubbed thoroughly with a coarse wash cloth or, in case of patients with rather tough skin, with a brush The ointment is then rubbed in vigorously over the entire surface below the chin line, particularly in areas where the eruption is well marked The ointment is rubbed in night and morning for from two to four days, the patient wearing the same underwear continuously Ten or twelve hours after the last application the patient takes a bath and changes his underwear the bed linen is also changed Stelwagon asserts that one such course of treatment thoroughly carried out usually suffices Itching usually lessens or wholly disappears after the first application, slight itching may occur toward the end of the treatment, due to the irritation of the sulphur Occasionally this may be mistaken for a return of the scabies

After the preliminary soaking and scrubbing Crocker in private practice, uses the following application recommended by Kaposi

℞ Naphthol	15 parts
Prepared chalk	10 parts
Soft soap	50 parts
Lard	100 parts

M To be well rubbed into the affected areas

For infants and young children Crocker uses this half strength and omits the soft soap It is not irritating to the skin, as is sulphur, and it has no odor It is too expensive, however, for dispensary practice

Incompatibles

PRECIPITATION BY ACID

In the following prescription the liquid extract of licorice is evidently intended to conceal the taste of the quinin, but the acid precipitates the glycyrrhizin, making a turbid mixture and much reducing the sweetness of the licorice

℞ Quininæ sulphatis	gr xv	1
Acidi sulphurici dil	ʒi	4
Fluidextracti glycyrrhizæ	f℥ss	15
Aquæ q s ad	f℥iii	90

The *Pharmaceutical Journal* advises the druggist in this case to ask the prescriber to authorize omission of the acid and suspension of the quinin instead

Medicolegal

Liability in Turning Sick Person Improperly Away

The Supreme Court of Minnesota says that the case of Orlando Depue vs John Flateau, Sr and Joh Flateau, Jr was an unusual one on [illegible] and "all four" [illegible] re difficult to find in t[illegible] at after [illegible] arch [illegible] has [illegible] ch t[illegible] al [illegible] th [illegible]

patient at his own home. Such treatment must always be under the supervision of the physician. Among poor patients he advises the formation of a tuberculosis class, to which patients come once a week for directions. He maintains that the patient should go out of doors in rainy and snowy weather at all times of the year, properly protected from wet and wind. His clothing should be of the lightest weight and the smallest number of garments of any material that will keep him comfortable. Clapp believes that a morning temperature of 99 F. indicates no exercise for the day, while over 101.5 calls for rest in bed for part of the day.

13. **Rare Forms of Chorioiditis.**—Bull calls attention to the chorioiditis that arises in the course of severe malarial infection and in intestinal intoxication. It is caused by microorganisms conveyed to the eye by the blood current, where they are arrested, and adhere to the walls of the choroid vessels. Malarial chorioiditis is rare and found only in the severe southern forms of the disease. The entire uveal tract may be involved, including the choroid, iris and ciliary bodies. The attacks are periodic, relapses are frequent, and the course is tedious. Treatment consists in the administration of quinin, iron and arsenic, with attention to the diet and general hygiene. Chorioiditis from intoxication of gastrointestinal origin is a still rarer condition. In these chorioid infections there are the usual symptoms. The physical findings are yellowish patches on the retina, similar to those seen in malaria, and a marked skin eruption of a pemphigoid type.

15. **Pus Tubes in the Male.**—Belfield says that pus infection in the seminal tube of the male is quite as frequent as in the Fallopian tube in the female. It is infrequently recognized, since the symptoms are common to other urinary conditions. Gonococci, pyogenic bacteria and tubercle bacilli are some of the causes of infection. The author suggests simple incision with a cautery knife from the rectum to relieve pus tubes. He also suggests that the vas deferens may be opened, the cut edges stitched to the skin and a solution injected through a curved hypodermic needle. Injections are made daily until the infection is over, when the fistula can be closed.

Boston Medical and Surgical Journal.

May 2

17. Gall Bladder Disease with Special Reference to Its Gastric Symptoms. P. K. Brown, San Francisco.
18. *Sahli's Desmoid Reaction. H. W. Carey, Troy, N. Y.
19. *Roentgen Diagnosis of Urinary Calculus. P. Brown, Boston.
20. Summer Climate of Oracle, Pima County, Arizona. I. W. Brewer, Fort Huachuca, Ariz.
21. Extensive Nerve Injury from Removal of Cervical Glands. J. W. Courtney, Boston.

18. **Sahli's Desmoid Reaction.**—Carey verifies Sahli's results in determining the sufficiency of gastric digestion by means of the desmoid capsule. In the 25 cases on which he bases his results, it was found that, with but one exception, there was no discrepancy between the desmoid reaction and the analysis of the test breakfast. He believes that this reaction is of value in determining the digestive sufficiency of the gastric juice and its ability to digest the meal with which the capsule is given. In other words, it is a test for both free hydrochloric acid and pepsin, and a positive reaction indicates that both constituents are present in sufficient quantities to digest the full meal. As a means of differentiating between various functional disorders it is of little or no value. Neither does it give any clue as to stasis or loss of motility. Carey believes, therefore, that while it can not take the place of the stomach tube and test breakfast, it can be used as a valuable control. It permits of differentiating the mild from the severe cases of gastric insufficiency.

19. **Roentgen Diagnosis of Urinary Calculus.**—Brown emphasizes the value of what he terms the ante operative preparation of the patient when examination for urinary calculus is to be made by means of the Roentgen ray. He advocates local compression of the area to be examined and a previous emptying of the stomach and bowel, so as temporarily to force away the intestinal content from the renal, ureteral or vesical regions. Arrangements for such an examination should be made at least 24 hours ahead. He recommends the use of castor oil as a preliminary purgative and the additional use of a soap suds and glycerin enema shortly before the sitting.

Lancet-Clinic, Cincinnati

April 27

22. The Reason Why Especially Concerning the Stomach. M. A. Austin, Anderson, Ind.
23. Pruritus of the Anal Region. B. Asman, Louisville, Ky.
24. *Present Operative Necessities for Cure in Tuberculous Orchitis. C. E. Barnett, Fort Wayne, Ind.
25. The Opsonins. A. L. Knight, Madisonville, Ohio.

May 4

26. Diagnosis and Treatment of Fracture Occurring in the Vicinity of Joints. W. D. Haines, Cincinnati.
27. A Possible Explanation of the Formation of Drug Habits. H. A. Rodebaugh, Columbus, Ohio.
28. Early Diagnosis of Phthisis Pulmonalis in Adolescents. G. Strohbach, Cincinnati.

24. See abstract in THE JOURNAL, Dec. 8, 1906, page 1944.

St. Louis Medical Review

April 27

29. Three Cases of Balantidium Coli. D. A. Gray, Little Rock, Ark.
30. Etiology of Chronic Enlargement of Prostate. H. J. Scherck, St. Louis.
31. Diagnosis of Obstructive Prostatic Hypertrophy. B. Lewis, St. Louis.
32. Hypertrophy of Prostate Not Causing Urinary Obstruction. J. L. Boogher, St. Louis.

Journal of Cutaneous Diseases, New York.

April

33. *Diet as an Etiologic Factor in Diseases of the Skin. H. W. Stelwagon, Philadelphia.
34. *Diet as a Therapeutic Measure in Diseases of the Skin. G. H. Fox, New York.
35. *Dermatitis Exfoliativa. B. Foster, St. Paul.
36. Significance of Indican in the Urine or Those Afflicted with Certain Diseases of the Skin. M. F. Engman, St. Louis.

33. **Diet as a Cause of Skin Diseases.**—Stelwagon says that while certain foods are toxic to some individuals, it must be remembered that skin eruptions may be the result of over eating, or that even underfeeding, may be the result of toxic and putrefactive changes which the food has undergone before or immediately after consumption, and, further, the possibility of chemical preservatives and not the food itself should be borne in mind.

34. **Diet in Treatment of Skin Diseases.**—Fox believes that many persons affected with diseases of the skin are in the habit of eating too much, especially of nitrogenous foods. He says that, when prescribing a diet, it is far better to allow a few nutritious and easily digested articles for a time than to make out an expurgated diet list. The effect of the diet on the disease must be studied carefully in order that the patient may eat only that which he can digest and which does the most good. The food should also be prepared properly and the patient should eat regularly without haste and not while under the stress of excitement and worry.

35. **Dermatitis Exfoliativa.**—Foster reports 12 cases of this affection, four of which occurred shortly after birth. The treatment which Foster has found most satisfactory consists of prolonged permanent warm baths. After coming out of the bath the patient is enveloped in flannel, soaked with either cod liver oil or olive oil. Foster suggests administering carbolic acid internally in one half grain doses, watching the kidneys carefully.

St. Paul Medical Journal

April

37. *Dangers in Impure Foods. V. C. Vaughan, Ann Arbor.
38. *How Far Has the Sanatorium Treatment of Tuberculosis Proved Successful? A. C. Klebs, Chicago.
39. *Management of Gastric Ulcer. J. W. Bell, Minneapolis.
40. *Therapeutic Abortion. C. Johnson, Willmar.

37. **Dangers in Impure Foods.**—The dangers and the nature of impure foods are set forth fully by Vaughan, in fact, he covers almost the entire realm of food adulterations as well as food preservatives. He lays down the following requirements as being, in his opinion, the essentials of a substance before its employment as a food preservative should receive legal sanction. 1. It must be a real preservative, keeping the food in a wholesome condition and not merely retaining the appearance of freshness while bacterial changes continue. 2. In the largest quantities used, it must not materially impair any of the digestive processes. 3. It must not be a self poison in any amount or if such, it must be added to foods only by persons qualified by special training and officially authorized, and food containing these substances must be labeled plainly and the kind and amount of the preservative used must be made known, not only to the buyer but to each consumer.

38 **Sanatorium Treatment of Tuberculosis**—Klebs' views on this subject are so well known that it is not necessary to repeat them

39 **Management of Gastric Ulcer**—The treatment described by Bell agrees with that generally employed in cases of acute and chronic gastric ulcer

40 **Therapeutic Abortion.**—Johnson is of the opinion that therapeutic abortion is generally advised too reluctantly In stead of being a remedy of last resort, it should be advised early, whenever the condition of the mother is such that there is no reasonable probability that she can carry the fetus to the age of viability without serious danger to life and health

Northwestern Lancet, Minneapolis
April 1

41 *Significance and Danger of Chronic Otorrhea C J Spratt Minneapolis
42 *Administration of Mercury in Treatment of Syphilis G P Crume Minneapolis
43 Surgical Diagnosis J E Moore Minneapolis
44 *Hydatid Moles O T Batcheller Brainerd
45 *Refractive Error as an Etiologic Factor in Headache C L Sherman Luverne
46 Case of Submucous Nasal Septum Resection R A Campbell Minneapolis

41 **Chronic Otorrhea**—Spratt points out the dangers that may result from a neglect to treat a chronic discharge from the ear He advises early incision of the tympanic membrane as a prophylactic measure, and cleanliness, free drainage and operation, if necessary, as curative measures

42 **Mercury in Syphilis**—The use of mercury in the treat ment of syphilis is discussed in general by Crume With re gard to hypodermic injections, the only objection he has to them is that they are painful, nor are they indicated, he says, when the patient is debilitated by other diseases or when he is very obese Certain it is, Crume declares, that it makes re lapses not only less severe and frequent, but obstinate, viru lent and malignant types become a rarity

44 **Hydatid Moles**—Batcheller reports one case and dis cusses the clinical history of the condition His patient went to term, delivery was uneventful, but the postpartum flow lasted for about two weeks

45 **Refractive Error as Cause of Headache**—Sherman re ports three cases to illustrate how both refractive error and other derangements must be corrected in order to secure relief from severe headaches

Kentucky Medical Journal, Bowling Green.
April

47 Skillful Use of Digitalis T C Holloway Lexington
48 *Treatment of Acute Gonorrhea D L Heflin Louisville
49 Rational Gynecology F L Koontz Louisville
50 Surgery of the Stomach J R Wathen Louisville
51 First Hour Surgery in Strangulated Hernia J G Carpen ter Stanford
52 La Grippe J T Price Harrodsburg
53 The Doctor s Automobile J B Bullitt, Louisville
54 *Treatment of Placenta Prævia F M Beard Shelbyville
55 *An Unusual Obstetric Case P Beauchamp Adairville
56 *Cancer of the Intestine D Barrow Lexington
57 Doctor s Differences Their Cause and Cure G G Thorn ton Lebanon
58 Diagnosis and Treatment of Incipient Tuberculosis J Mar tin Cynthiana
59 Pneumonia E T Bruce Louisville

48 **Treatment of Gonorrhea.**—The point especially empha sized by Heflin is that whether the case be treated by irriga tions, injections, internal administration, or along other lines, the treatment should be continued until the patient is well—not until the discharge ceases, but until the urine is free from shreds and the microscope fails to reveal the presence of the diplococcus of Neisser

54 **Treatment of Placenta Prævia**—Beard reports two cases of placenta prævia, in one of which there was a twin preg nancy In the latter there was a double placenta prævia mar ginalis In both cases a successful delivery was effected.

55 **Unusual Obstetric Case**—The case reported by Beau champ was one of left acromio iliac presentation Embryot omy was done after all other attempts at delivery had failed The head was hydrocephalic, the occipito mental diameter was 12 inches

56 **Cancer of Intestine**—Barrow reports three cases of can cer of the intestine, in which operation was done One patient died 18 months after the operation from recurrence of the growth, causing obstruction The remaining two patients are well, one two years, and the other four years after operation In both of these cases the tumor involved the cecum, necessi tating the resection of a portion of the cecum and the ileum

Bulletin of the Johns Hopkins Hospital, Baltimore
April

60 The Library of a Medical School W Osler England
61 Some Ana of the Marburg Collection M L Raney Baltimore
62 *Method of Preserving Outlines of Visceral Lesions on Nain sook or Suisse Material H A Kelly Baltimore
63 Clinical Study of Mushroom Intoxication W W Ford, Bal timore
64 *Review of 105 Reported Cases of Acute Pancreatitis A Egdahl Iowa City Iowa
65 Vena Cava Superior Receiving Two Upper Right Pulmonary Veins and Opening into Both Atria N W Ingalls Cleve land.

62 **Preserving Outlines of Visceral Lesion.**—In order to in crease the accuracy of his examination, Kelly makes a pictorial record on a transparent stiff tissue, such as nainsook, or suisse material, laid over the abdomen, on which the surface markings seen beneath are easily transcribed New records are made each time the patient returns for examination, thus permitting of comparison An analine or crayon pencil may be used

64 **Acute Pancreatitis**—Egdahl concludes his review of 105 cases of acute pancreatitis as follows 1 Gallstones are prob ably the most common single cause of pancreatitis Judging from this series, about 42 per cent of the cases of acute pan creatitis are associated with gallstones 2 Gastrointestinal disorders are the next most common cause of acute pancreati tis In this series of cases about 30 per cent belong to this group Seventeen out of 32 of this group gave a history of alcoholism It is probable that retrojection of bile may be caused by intestinal disorders closing the papilla of Vater 3 Acute pancreatitis may be caused by many other condi tions, such as typhoid, tuberculosis, mumps, trauma, syphilis, emboli, appendicitis, malaria and gastric ulcer 4 The organ ism most commonly present is *B coli communis*, next comes the streptococcus and the staphylococci 5 Typhoid is the most common of the acute febrile diseases present according to the previous histories of these acute cases of pancreatitis In the present series three were associated directly with ty phoid fever alone, and four had suffered from typhoid some time before the onset of the pancreatitis, and had apparently recovered, another had had typhoid and erysipelas But two out of these cases were associated with gallstones

Journal of the Arkansas Medical Society, Little Rock.
April 15

66 *Injuries of the Eyeball J W Price Memphis
67 Congestion of the Brain in Infancy W T Whaley McNeil
68 *Malformations and Maternal Impressions G A Warren Black Rock
69 Treatment of Diseased Conditions of the Kidneys R L Saxon Holly Grove
70 Hemoglobinuria R N Smith Collins
71 Anthrax of the Postnasal Space C C Stephenson Little Rock

66 **Injuries of Eyeball**—Price reports five cases of injury of the eye as illustrative of some points which he makes

68 **Maternal Impressions**—Warren believes in maternal im pressions He thinks that those who laugh at such things are laughing at science and that mind has power over matter *in utero* He reports one case and refers to a number of others in support of his views

Annals of Surgery, Philadelphia
April

72 *Experience in Cerebral Surgery F Hartley and J H Ken yon New York
73 *Possibilities and Limitations of Brain Surgery with Especial View to Traumatisms F D Gray Jersey City N J
74 *Value of Trephining as a Palliative Measure in Tumors of the Brain H A Bruce Toronto
75 *Operations for Neoplasms of the Tongue J Rogers New York
76 *Method of Using Tongue in Supplying Defect of Cheek W Bartlett, St Louis.
77 *Injuries and Diseases of the Hyoid Bone R. Winslow Bal timore
78 *Symptoms and Signs in Urinary Lithiasis. C L Leonard Philadelphia
79 *Tuberculosis of the Bladder G Walker Baltimore
80 Circumcision A Plastic in Constriction Prepuces O H Allis Philadelphia

72. [illegible]ences in Cerebral Surge[illegible] [illegible]enyon
prese[illegible] valu[illegible] [illegible]t [illegible]x

conclusions from this research and other experiences are that life insurance companies are not justified in excluding from insurance all persons with chronic ear affections, as they do in Germany If the ear affection is shown by its clinical course to be a benign one, the life expectancy is scarcely affected by it, and candidates should be accepted, with an extra premium The decision as to the benign character of the affection can be made only by a specialist

78 **Exercise During the Intervals Between Classes.**—Muskat urges brief and frequent gymnastic exercises, between classes, not attempting many movements, but doing each exercise very carefully and with precision He states that the medical school inspectors have reported that about half of all the school children suffer from curvature of the spine, not including the children who are merely round shouldered

80—This paper is practically the same as that which appeared in THE JOURNAL, May 11, 1907, page 1586, by Hoffa and Wollenberg

81 **Tetanus.**—Tilmann relates a case in which gangrene developed three days after a child had been kicked in the arm by a horse The arm was amputated at once, but two days later tetanus developed and the child succumbed He calls attention to the case to show that amputation, removing the focus, is not inevitably of benefit in case of tetanus In this case the focus had been removed two days before the first symptoms of tetanus The operation was done in a well equipped operating room and infection with tetanus during the amputation is out of the question In another case of tetanus described the knee had been run over and a large skin flap torn off Symptoms of tetanus developed on the tenth day and 10 c.c of tetanus antitoxin were injected into the spinal canal and the same amount into the right sciatic nerve, with morphin and chloral every hour The next day 12 c c. of antitoxin were injected into the sciatic nerve on the left side, and the next day 20 c c into the right side The patient soon recovered. Every suspicious wound at Tilmann's clinic is examined for tetanus bacilli, if found, antitoxin is injected at once

82 **Modification of the Bassini Technic**—The details of the technic are shown in several illustrations, as it has been applied in 89 cases in Papaioannou's service and in 21 elsewhere Primary healing without infiltration or injury of the seminal cord or tendency to recurrence was the rule in every case, including one very large hernia reaching below the knees The stump of the sac is fastened 2 5 cm above the inner inguinal ring where the seminal cord emerges, and 4 safety sutures above and below produce a solid muscular wall holding back the stump of the sac The rows of the sutures do not come above each other, but lap at least 2 cm

83 **Recurrences After Gallstone Operations.**—Ehrhardt remarks that the principal causes of recurrence are generally supposed to be the overlooking of concrements, the development of adhesions and the continuance of hysteric disturbances Infectious plugs of mucus in the biliary passages are liable to simulate true recurrence, but the main cause of recurrence of symptoms is to be sought in the glandular elements of the mucosa which are frequently of abnormal size and development, sometimes extending down to the peritoneal covering of the gall bladder Inflammation may persist in one of these little recesses in the mucosa—which he calls Luschka's ducts—and possibly a minute concrement in one may be overlooked They are to the gall bladder what an incipient diverticulum is to the intestine The practical conclusions are that the best way to prevent recurrence is to remove the gall bladder entirely

85 **Transmission of Syphilis to Dogs**—Hoffmann and Brüning announce that inoculation of two dogs in the cornea with scraps from a human primary syphilitic lesion induced an affection presenting the characteristics of syphilis, even to the positive finding of the pale spirochete. Inoculation in the anterior chamber and also scarification of the cornea, in both rabbits and monkeys, induced a syphilitic keratitis This confirms the fact that it is not necessary to inoculate the virus into a blood vessel, but that the lymph spaces offer favorable conditions for the proliferation of the spirochetes

Münchener medizinische Wochenschrift.

88 (LIV, No 10 pp 449 504) Diagnosis of Infantile Scorbutus (Barlow sche Krankheit) W v Starck.
89 *Influence of Cholin and of Roentgen Rays on Course of Pregnancy (Einfluss des Cholins, etc.) v Hippel and H Pagenstecher
90 *Action of Roentgen Rays on Nephrectomized Animals (Zur Frage des Leukotoxins) J Schmid and A Géronne
91 Strength of the Percussion Stroke. (Perkussionsschlag) R. Geigel
92 *Benzidin Test for Occult Bleeding in Urinary and Digestive Organs (Benzidinprobe) E Schlesinger and F Holst.
93 *Operative Treatment of Jacksonian Epilepsy (Op. behandelter Fall von Jacksonscher Epilepsie.) S Auerbach and E. Grossmann
94 Enophthalmus A H Pagenstecher
95 *Silver Acetate in Prophylaxis of Ophthalmia Neonatorum (Blennorrhoe der Neugeborenen) Seefelder
96 Treatment of Hammer Toes (Hammerzehen) Wende
97 Experiences with Disinfection in East African Ports (Desinfektion in ostafrik Häfen) Wagner
98 (No 11 pp 505-552) *Improved Technic of Electrophysiology (Saiten Elektrometer) M Cremer
99 *Course of Urobilinuria in Typhoid Fever (Urobilinurie) J Rubin
100 *Cysticercus in Fourth Ventricle as Cause of Sudden Death. (Zystizerken im IV Vent) M Versé
101 Microscopic Worms in Stomach of a Patient with Ozena (Rhabditiden im Magen einer Ozinakranken) O Frese
102 Systematic Treatment of Hay Fever (Heuschnupfenbehandlung) G Avellis
103 Deliveries Under Scopolamin Morphin Semi anesthesia (Sk Morph Halbnarkose) O Bass Id. Hochelsen
104 *Protection of Perineum (Dammschutz) E Toff
105 *Instrument for Obtaining Drop of Blood for Diagnostic Purposes the Hemostix (Hämostix) M Schottelius
106 *Radiotherapy Applied within the Cancer (Intratumorale Bestrahlung als Fortschritt der Radiotherapie) H Strebel
107 Knee-Elbow Posture to Aid Internal Version (Behandlung der verschleppten Querlage) Langes

89 **Influence of Cholin and Roentgen Rays on Course of Gestation.**—The rabbits in the experiments related were injected with cholin or exposed to the Roentgen rays, the results indicating that gestation was arrested and the embryo absorbed under their influence See editorial in THE JOURNAL, May 4, page 1530

90 **Influence of Roentgen Exposures on Nephrectomized Animals**—The toxic effects of the exposures were greater in the nephrectomized animals This suggests that a leucotoxin is formed under the action of the rays and that this leucotoxin is eliminated by the kidneys

92 **Further Experience with the Benzidin Test for Invisible Hemorrhage**—Examination of the stools from more than 150 patients and urine from 200 patients during the last few months has confirmed the reliability and the accuracy of the benzidin technic It was described in these columns on page 1334 of the last volume Admixture of blood from the food may obscure the findings in seeking for minimal hemorrhage in the digestive tract but this error is not possible in examination of the urine The test with urine is twenty times more sensitive than the Heller urine test and five times more than the guaiac and aloin test. The reliability and delicacy of the test render it very valuable for examining for blood in the urine and for hemoglobinuria The urine must be treated first with glacial acetic acid and ether to prepare it for the test. From 0 5 to 1 c c of glacial acetic acid is added to 10 c c of the urine and lightly shaken Then about a third of ether, by volume, is added and the whole is thoroughly shaken and set aside for a short time The separation of the supernatant layer of ether is aided by addition of from 5 to 10 drops of alcohol and slight shaking The limpid layer of ether is then taken up in a pipette and transferred to another reagent glass containing the benzidin reagent The contents of the glass are shaken a little to distribute the ether extract through the reagent In the presence of even traces of blood, the fluid turns green in a few seconds, or blue in case there is much blood present The benzidin reagent is merely 0 5 c c. of a freshly prepared mixture of benzidin and acetic acid and 2 or 3 c c of a 3 per cent solution of hydrogen dioxid The specimen of stool, the size of a pea, is suspended in about one fifth of a reagent glass of water and boiled up briefly A few drops of this suspension are added to the benzidin mixture, in case of the presence of blood the fluid turns green or blue The patients are not allowed to eat any meat during the three or four days preceding the test Positive findings then indicate without fail that the source of the blood is in the stomach or intestines In cases giving negative findings, con

trol examination with other tests never resulted positively Schlesinger and Holst sum up their experiences, therefore, in the statement that the testimony is all in favor of the accuracy and reliability of the benzidin technic

93 **Operative Treatment of Epilepsy**—Auerbach reviews the opinions and experiences of the most prominent German surgeons on this subject, and reports a case of Jacksonian epilepsy showing remarkable improvement to date after excision of a part of the cortex, 5x15x30 mm., corresponding to the motor disturbances as determined by electric tests In childhood and youth the results of operative intervention are liable to be better than after 40, as also when the disturbances are more strictly limited to one side, and when there is a history of trauma affecting the head or of an encephalitic process The disturbances in the case described developed during the incubation stage of scarlet fever, without trauma He thinks that accumulating evidence is limiting more and more the assumption of an idiopathic epilepsy as some unsuspected underlying lesion is becoming such a frequent discovery

95 **Silver Acetate in Prophylaxis of Ophthalmia Neonatorum.**—Seefelder states that he treated one eye with 2 per cent. silver nitrate and the other eye with 1 per cent silver acetate in 50 infants in his practice and found that the results were fully as good with the acetate as with the nitrate The acetate has the advantage, he says, that it is harmless under all circumstances, which can not be said of the silver nitrate

98 **String Electrometer**—Cremer has had a string electrometer made, similar to the string galvanometer, and states that it is superior to all other instruments yet devised for electrophysiology He describes its workings in detail

99 **Urobilinuria in Typhoid.**—Rubin gives the tracings of the curve of urobilinuria in eight cases of typhoid fever They show that very high urobilinuria, in the onset of a febrile affection suggesting typhoid, speaks against its typhoid nature Pronounced negative findings also have the same significance when the fever is subsiding by lysis Pronounced urobilinuria acompanying lysis is a good omen, but when the urobilinuria persists into convalescence it should be regarded as an indication for great caution in the diet and in allowing the patient to get up He should not be dismissed until the urobilin in the urine has returned to normal proportions

100 **Cysticercus in Fourth Ventricle.**—Versé describes two cases in which sudden death occurred and autopsy revealed dead cysticerci free in the fourth ventricle. In both cases the foramen of Magendie had been long occluded The sudden death must have been due to the internal hydrocephalus which had likewise long existed One of his patients, a woman, died as she sat up in bed.

104 **Protection of the Perineum**—Toff remarks that the number of cases of laceration reported from various clinics shows that the technic for preventing injury of the perineum is still far from perfect He believes that better results could be attained if more regard were paid to the most favorable diameter of the head in guiding delivery Most of the tears occur while the brow is passing, the suboccipito frontal diameter being one of the largest, while the occipito frontal and the mento occipital are still larger and more dangerous He stands or sits on the right of the patient, and as soon as the head appears in the vulva he strives to deliver more and more of the back of the head past the symphysis, while forcing the head of the child forward on its breast After the occiput has passed the symphysis, then the face can be readily delivered, especially if the patient is turned on her left side Pressing the back of the neck against the symphysis also aids in gaining space to spare the perineum By this means the shortest diameter of the head, passing from the suboccipit to the bregma, is the one involved when the head is emerging In face presentation the same principle is followed, working out the chin as far in advance as possible, bending the head backward, and delivering the back of the head as the face was delivered above The technic is illustrated with 6 diagrams

105 **Instrument for Obtaining Blood for Diagnostic Purposes.**—Schottelius gives an illustration of a convenient little instrument for obtaining a drop of blood Two metal rings fit on the tips of the thumb and forefinger Each ring is shaped like a broad signet ring, but one has a slit in which works a small triangular knife on a spring Holding the lobe of the ear between the thumb and forefinger, armed with these rings, pressure on the knife makes the desired little incision, exactly the right size and depth, when the ear can be at once released The physician can put on the rings and make the incision without attracting the patient's attention to the instrument It has been in use in his clinic for several years with constant satisfaction

106 **Intratumoral Roentgen Treatment of Cancer**—Strebel has done a large amount of pioneer work in radiotherapy He advocated three years ago the introduction of radium inside the tumor as a routine procedure in radium treatment of cancer He has since devised a small Roentgen tube to use in the depths of the tumor The tumor is incised under adrenalin Schleich infiltration, the tube is introduced and a weak current turned on The adrenalin and the pressure of the tube keep the blood expelled from the parts, while most of the radiant energy is utilized, absorption by the skin being abolished. The epidermis is generally assumed to absorb 1/10 of the radiant energy, while the derma proper absorbs more than ½ He claims that in ordinary superficial exposures the rays penetrate only a short distance into the tissues, the deeper parts of the tumor escaping most of their influence, and that all this is done away with by this intratumoral exposure which brings the action of the rays exactly where they are most needed He also says that it obviates danger of the dreaded Roentgen dermatitis, as the rays do not reach the skin first, and that the exposures can be continued as long as desired without fear of cutaneous lesions One form of the tube has the outer side protected so that the tube can be shoved in under the skin and send its rays downward only, sparing the protected skin above. This has been found useful in treating metastases and tumefied glands near the surface With these intratumoral exposures "cancer nests" can be thoroughly destroyed without injury to the skin His experience has convinced him that the formation of antibodies or other immunization processes can be utilized as adjuvants to direct Roentgen treatment of the tumor proper This he accomplishes by not restricting the exposures to the tumor alone, but by a general application of the rays to larger portions of the body, in order to accelerate the hemolytic processes and thus induce a kind of autoserotherapy in the cancer patient He adds that recent research showing the marked hemolytic properties of potassium chlorate and the way in which cancer is influenced by it (Lomer) justifies its tentative administration internally and externally as an adjuvant to radiotherapy He also refers to the works of Werner, Exner, Heineke and others which have demonstrated that local and general Roentgen exposures induce hyperleucocytosis and lymphopeny, that substances appear in the tissues after exposure for which the polynuclear leucocytes display a positive chemotactic affinity, and that exposure of the leucocyte producing organs checks new formation of leucocytes He thinks that these facts can be utilized in radiotherapy of cancer, promoting the destruction of the malignant tumor by accelerating the hemolytic processes in general

Norsk Magazin f Lægevidenskaben, Christiania
Last indexed page 1463

108 (LXVIII No 2 pp 105 216) *Mouse Tumors and Experimental Transmission of Cancers (Muskræft og experimentel Kræftforskning) M Haaland
109 *Pathogenesis and Treatment of Ulcer of the Stomach (Ulcus Ventriculi) J Thesen
110 *Carcinoma of the Prostate with Metastases in Spine and Peritoneum (Carc. Prostatae) A. Nilssen

108 **Mouse Cancers**—Haaland describes his experience with experimental transmission of tumors with research on heredity, immunity etc He remarks in conclusion that experimental transmission of malignant tumors is still in its infancy and has not yet produced any results that can be applied in practice It has afforded, however, a [illegible] various factors which influence the [illegible] malig[illegible] tumors and suggested [illegible] for [illegible] war[illegible] malignant disease In [illegible] of the general constitut[illegible] disease The cancer [illegible] ha[illegible]

tumor is due to embryonal or aberrant cells or to an impulse from some unknown parasite, but experimental research has demonstrated that these are not enough—there must be some constitutional predisposition or the cancer cell is unable to proliferate and to produce a tumor The transplantable mouse tumors enable us to submit this constitutional tendency to experimental tests The experiments described are susceptible of various explanations, but Haaland thinks that the most plausible is Ehrlich's assumption that the tumor growth is a "fight between cell avidities"

109 **Treatment of Ulcer of the Stomach.**—Thesen explains gastric ulcer as a chronic, infected ulceration, secondary to some septic process in mouth, nose or throat, accompanied by a local lymphangitis with hyperalgesia of the corresponding parietal peritoneum The latter is the cause of the pains He cites statistics to show that the ulcers are always located on parts of the stomach corresponding to certain lymphatic tracts especially the retroperitoneal The symptoms are explained by this conception of the origin of gastric ulcer, and its correctness is confirmed, he thinks, by his fine results in 35 cases of gastric ulcer in which treatment was based on these premises He enforces strict bed rest for three weeks, or for six weeks in the older cases, and applies a wet pack around the entire trunk, as he ascribes the pains to the retroperitoneal glands rather than to the stomach itself He agrees with Lenhartz in regard to the necessity for not starving the already famished patients any more, and he also agrees with those who insist that rest is what the ulcerated stomach needs He reconciles these apparently contradictory indications by assuming that the food can not directly induce pain in the stomach and that direct irritation of the ulcer has only a very mildly deleterious influence on the ulcer On the other hand, the slightest movement of the stomach is painful, and any movement of the kind is extremely prejudicial for the healing of the ulcer He therefore gives his patients all the food they can take without its causing painful movements of the stomach The quantity is more important in this respect than the quality The meals must be small and frequent, or, as he expresses it, the ulcer patients do not have any meals but keep lunching all day long—never taking more than from 15 to 100 c.c. at a time One of his patients could eat a raw plum without hearing from it, but had pain after even a small cup of milk In case of thirst or too small amounts of urine, he supplies water by rectal injection The foods that excite the stomach peristalsis least are the white of egg, raw scraped meat and fish, butter and cream, and he restricts the diet to these. He obtains good results from bismuth, but he explains them differently from others, ascribing the benefit to the disinfecting action of the bismuth on the surface of the ulcer and also to the probable fact that the bismuth albuminoses formed are taken up by the lymph and are carried into the lymphatics where they exert a direct curative action on the lymphangitis He does not give the bismuth according to the usual technic, but administers it in suspension in the smallest possible amount of water, in the morning, on the fasting stomach, without previous lavage He gives the bismuth for five days, then empties the bowels with a copious enema, and recommences the bismuth on the seventh day, until he has thus given fifteen powders He then suspends the bismuth, as a rule, but has sometimes given up to 45 powders without appreciable harm All pain generally vanishes by the second powder, and he ascribes to the credit of the bismuth the fact that his patients are so soon able to eat without pain He has never found blood in the stools after they show traces of bismuth except after severe hematemesis He has experimented with silver nitrate, but never noted such benefit as after the bismuth probably because the dosage must be so small In the first 5 days with 10 gm of bismuth, the patient is allowed from 350 to 550 c c milk, with from 0 to 4 raw eggs The sixth day no bismuth, but a copious enema In the next 5 days the food allowed is gradually increased to 750 c c. milk, 50 c c cream, 5 eggs, a little fish and 3 biscuits with butter and raw scraped meat He gives the bismuth in 100 c c. of water and allows the patient half this amount of water afterward The patient then reclines with the pelvis raised for 20 minutes and no food is allowed till after he has rested quietly for 45 minutes The milk is given in sips at first, even later, more than 50 c c is never allowed at a time sometimes substitutes kefir or uses lime water with the After the eighteenth day the patient is allowed to get The eggs are given raw at first, but later can be cooked He does not approve of bread until two or months after the commencement of the course of treatment.

110 **Metastases from Cancer of the Prostate.**—In the reported the carcinoma in the prostate had induced in the seminal vesicles, bladder, peritoneum and spine. In spine the process was an actual osteoplastic carcinosis and principal symptoms were those of compression of the equina

Books Received

Acknowledgment of all books received will be made in this and this will be deemed by us a full equivalent to those them. A selection from these volumes will be made for review, dictated by their merits, or in the interest of our readers

MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY By R. A Witthaus A.M, M D, Professor of Chemistry, Physics Toxicology in Cornell University and Tracy C. Becker A.B, Counselor at Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo With the Collaboration of Others. Second Edition Volume II Cloth. Pp 1008 $6 00 New York William Wood & Co, 1907

PRACTICAL PHYSIOLOGICAL CHEMISTRY, A Book Designed for Use in Courses in Practical Physiological Chemistry in Schools of Medicine and Science By Philip B Hawk, M S Ph.D, Demonstrator of Physiological Chemistry in the Department of Medicine of the University of Pennsylvania. With Color Plates and Other Illustrations Cloth Pp 416 Price $4 00 Philadelphia P Blakiston s Son & Co 1907

DIAGNOSIS OF ORGANIC NERVOUS DISEASES By Christian A Herter M D, Professor of Pharmacology and Therapeutics at Columbia University Revised and Enlarged by L. Pierce Clark, M.D Visiting Neurologist to the Randall's Island Hospitals and Schools With 109 Illustrations Cloth Pp 690 Price, $3 00 New York and London G P Putnam s Sons 1907

DIE BEHANDLUNG der Angeborenen Hüftgelenksverrenkung, und DIE BEHANDLUNG der Tuberkulösen Wirbelsäulenentzündung von Dr F Calot. Uebersetzt von Dr P Ewald Illustrated, mit Vorwort von Prof Dr Oscar Vulpius Paper Stuttgart Verlag von Ferdinand Enke, 1906-7 (See abstract in THE JOURNAL May 18, page 1728.)

PRACTITIONER'S HANDBOOK OF MATERIA MEDICA AND THERAPEUTICS Based on Physiological Actions and the Indications in Small Doses, to Which is Added Some Pharmaceutical Data By Thos S Blair, M.D, Member Visiting Staff of Harrisburg City Hospital etc Cloth Pp 253 Price, $2 00 net. Philadelphia The Medical Council

TICS AND THEIR TREATMENT By Henry Meige and E Feindel with a Preface by Prof Brissaud Translated and Edited with a Critical Appendix by S A. K. Wilson M A. M.B B Sc. Resident Medical Officer National Hospital for the Paralyzed and Epileptic London Cloth Pp 386 Price $2.50 New York William Wood & Co, 1907

SURGICAL DIAGNOSIS by Daniel N Eisendrath A.B, M.D, Adjunct Professor of Surgery in the Medical Department of the University of Illinois College of Physicians and Surgeons Illustrated partly in colors. Cloth Pp 776 Price, $6 50 net. Philadelphia and London W B Saunders Co 1907

SIXTH ANNUAL REPORT OF THE BOARD OF TRUSTEES of the New York State Hospital for the Treatment of Incipient Pulmonary Tuberculosis Ray Brook N Y For the Year Ending Dec. 31 1906 Transmitted to the Legislature Jan 28 1907 Paper Pp 39 Albany J B Lyon Company

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EXPERIMENTS ON ANIMALS By Stephen Paget With an Introduction by Lord Lister Third Edition Revised Cloth Pp 387 Price, $3 00 New York William Wood & Co 1907

FORTY FIFTH GENERAL ASSEMBLY OF ILLINOIS Index to Senate and House Bills Paper Edited and Published by the Bureau of Legislative Publicity, Springfield Ill

THE MIRACLE WORKER By Gerald Maxwell Frontispiece by G F Gray Cloth Pp 340 Price $1 50 Boston John W Luce Co 1907

WELLCOME S PHOTOGRAPHIC EXPOSURE RECORD AND DIARY 1907 Cloth Pp 259 New York and London Burroughs Wellcome & Co

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